

# TRINITY COLLEGE CAMBRIDGE



ANNUAL RECORD 2019



Trinity College Cambridge  
Annual Record  
2018–2019

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## Editorial

Much of this year has been spent in anticipation of change. Sir Gregory Winter indicated that he would step down as Master during the summer vacation and Dame Sally Davies has been elected to succeed him at the start of the coming academic year. Sir Gregory's seven-year term has been something of a whirlwind as he has tried, self-avowedly, to bring the College into the twenty-first century. Whether he has succeeded is doubtless a moot point. However, his contribution is strongly marked in a new programme of post-doctoral awards, support for the setting up of new companies to exploit scientific research and much closer relations with our alumni, whose generosity is deeply appreciated. He has certainly moved Trinity into the vanguard of the University's development. He has also added to the College's remarkable record of distinction by, himself, receiving the Nobel Prize for Chemistry during his tenure. We thank him for the great efforts that he has spent on our behalf.

We also welcome Dame Sally Davies as our new Master, the first woman to hold the post in a fitting (if inadvertent) conclusion to our recent celebrations of the fortieth anniversary of the admission of women to Trinity. Dame Sally's gender was not an issue at the election. However, it has raised some question about the 'masculism' of our Statutes, which frequently anticipate the holders of office to be men – whether construed in English or Latin. This has provoked some discussion among the Fellows about whether and how terms might be rendered more feminine or gender-neutral or even transgender: where, for example, the current 'Father' of the College might be known as the 'Parent' or 'Guardian' or (God forbid) 'Mentor'. Fortunately, perhaps, Dame Sally has indicated her own preference for tradition and will keep the title of Master – thereby declining one suggestion that she might prefer to be known as the 'Mater'.

Much more than her gender, Dame Sally's previous occupation was the cause of some concern among the Fellowship. Whether the former Chief Medical Officer

of the United Kingdom would tolerate lashings of bread-and-butter pudding and crème brûlée at High Table, not to mention multiple decanters of claret and port, set several stomachs a-flutter. However, we are much re-assured that Dame Sally's preference is for moderation rather than abstinence. As we all know, the Fellows – like Robert Clive – find themselves regularly “astonished at [their] own moderation”. We much look forward to Dame Sally's installation as our new Master.

Elsewhere, the year has had its highs and lows. Trinity's sporting achievements included a rare moment when the College was represented in all four Cambridge boats on Boat Race Day 2018 – and, in one case, by someone who went on to win a medal at the World Rowing Championships (Imogen Grant). Trinity's 'gamesmanship' also received an accolade when three Trinity teams finished in the top three places (among 150) in a national computer programming contest. With individual examination results now regarded as private and confidential, it is no longer possible to construct public tables of inter-collegiate Tripos performance as in yesteryear. However, 'secret' research suggests that Trinity recovered from rather disappointing results (especially in the Humanities) in 2018 to re-establish its leading position among the colleges in 2019. Mathematics dominated, as always, but even in subjects such as History a near-majority of students received Firsts.

On the debit side, Alex Walsham, Arthur Asseraf, Ross Wilson and Philip Knox resigned their Fellowships following the College's decision no longer to support the Universities Superannuation Scheme. They were outstanding teachers and will be much missed. We also lost a number of distinguished older Fellows to the inexorable forces of Time. These included our former Master, Sir Michael Atiyah, and Sir Peter Swinnerton-Dyer, who became Master of St Catharine's. They stood among the most distinguished mathematicians of their generation. Also departed are the economist Robert Neild, whose expert knowledge of the College's finances was matched only by that of the world's oyster cuisine, and the English don, Eric Griffiths, whose impact on students and colleagues was deep and memorable. We include full obituaries of them all.

Trinity's name is widely synonymous with the study of mathematics and this year marked the one hundredth anniversary of the College's Mathematical Society. Our Features section includes an account of that celebration together with a memoir on the foundation of the Society, culled from the papers of the Milne family to whom we are very grateful. Our 'Life Scientifique' this year is

that of Sir Gregory Winter, taken from a lecture delivered to the College in the Winstanley Lecture Theatre. His Nobel Prize-winning research on antibodies has had a huge impact on the treatment of a variety of medical diseases. The account which he provides here also may go some way to demystifying the arrows drawn across the middle of his portrait in the Hall (and to dispelling rumours that he once auditioned for a Harry Potter film). To mark the election of our first female Master, we borrow from the project of one of our undergraduates (Amelia Hutchinson) on the Hidden History of Trinity Women. The essay reveals the important role played by women connected to Trinity in the history not just of the College, but of female education and emancipation across the country.

Finally, Boyd Hilton reflects on the less well-known side of a very well-known man. Sir John Bradfield dominated College affairs across half-a-century and was primarily responsible for Trinity's rich endowment today. However, he was also a great builder involved in developing much of the modern fabric of the College. His name is familiarly associated with Angel Court which is not, perhaps, the most distinguished of constructions: it is described as of 'subtopian banality' in one edition of *Cambridge Architecture*. But Boyd shows that Bradfield's vision was much wider and embraced several of Trinity's greater successes such as Blue Boar Court and the Wolfson Building. Boyd also reveals how the Development Plan Committee became something of a battle ground between those seeking to protect the historical and aesthetic and those advocating the virtues of modern 'brutalism' – with Bradfield, in sharp contrast to his conservative tastes elsewhere, belonging firmly in the latter camp. Out of the battle, which neither side entirely won, emerged Trinity's most acclaimed (and much-awarded) building project of the twentieth century: namely, Burrell's Field.

In buildings as in College life, the old steadily gives way to the new and we now look forward to our next era under Dame Sally's Mastership, which we hope will be as successful as that of her predecessor. With that prospect in mind I shall wish you, once more, a very Merry Christmas and Happy New Year.

STOP PRESS: We have just heard that Professor Didier Queloz (2013) has won the Nobel Prize for Physics 2019. I am sure that you will join the whole of the College in offering him our warmest congratulations.

**David Washbrook (2008)**





# COMMEMORATION & OTHER SPEECHES

CHAPEL ADDRESS

THE HEALTH OF THE COLLEGE

THE MASTER'S RESPONSE ON BEHALF  
OF THE COLLEGE

ARMISTICE CENTENARY  
DINNER SPEECH

THE MASTER'S MIDSUMMER  
DINNER SPEECH

FROM THE NEW MASTER —  
DAME SALLY DAVIES





## Commemoration



### Chapel Address at Commemoration of Benefactors 15 March 2019 Hugh G.M. Willamson OBE, FBA, (1966)

Master, Fellows, Members and Friends of the College,

One way or another we have all benefitted from the generosity of our benefactors. Some are obvious, even as we look around us. Others are more obscure but nonetheless appreciated.

During my first Long Vac as an undergraduate – as long ago as 1967 – I received a letter from my tutor here (Dr Robson) asking if I was the son of a Haberdasher or a Staffordshire man. He wrote that even if I were not I would be awarded a Jeston Exhibition anyway. The inwardness of this escaped me at the time, but I was very glad of the cheque for £50. He also wrote to say that I had been awarded a Dealtry Prize, to which I reacted in a similar manner. And in those days one could buy several books for £50 and have them stamped with a crest at Galloway and Porter's; *O tempora!*

Nowadays, of course, we are more curious about the identity of benefactors than we were then, so that only more recently have I learned that we do not know much about Roger Jeston of London. In his will of 1622 he left property to the Haberdashers, annual income from which even then was over £100, to be distributed to various causes, including three scholarships for poor scholars studying Divinity at Trinity as appointed by the College, with preference given to children of the Company of Haberdashers or of any Staffordshire man. I suppose I was a bit lucky to get this, not only because I did not match his preferences and could hardly be described as poor, but also because in 1992 the United Jeston charities were, as the Charity Commission terminology

has it, ‘amalgamated’, which would probably also have eliminated me from consideration. Beyond that we seem to know next to nothing of Roger Jeston, so that it is impossible to tell now whether I can still cite this award in my CV without embarrassment.

I am pleased to say that we are rather better informed about the Revd William Dealtry, whose friends established the prize in his memory in 1850 and which at that time brought in an annual income of 15 guineas. He studied maths here and graduated as second wrangler and second Smith’s prizeman in 1796. He was elected a Fellow of the College in 1798 but had to relinquish his fellowship when he got married in 1814. Meanwhile, he served for a while as a founding member of staff in mathematics at the new East India College in Haileybury, where he became a good friend of, among others, Robert Malthus. He held several church positions later on, none more significant than as rector of Clapham from 1813 on. Having much earlier been a private tutor there for a year, he became well acquainted with the Clapham sect and is said to have been active in their anti-slavery movement. Moreover he was elected a Fellow of the Royal Society in 1810, had a reputation for cheer and wit, and gave generously to charity. So he was obviously a good thing. Some might find objectionable that he was a relatively strident evangelical, publishing pamphlets in defence, for instance, of the Church Missionary Society and the British and Foreign Bible Society. Moreover, here in Cambridge he was a close friend of Charles Simeon of King’s College and Holy Trinity Church and even came back the Sunday after Simeon died in 1836 to preach his obituary sermon. But that’s all OK by me.

Now, one of the prizes in his name was for an undergraduate in his first year at Trinity for knowledge in the Greek Testament. And here too, as with the Jeston Exhibition, I was more than lucky. You see, although all my teaching career was in Oriental Studies faculties, both here and in Oxford, my undergraduate degree was in Theology. The Dean of Chapel then was Harry Williams, and he tried to put everyone off doing Part I in Theology because, he said, it was very boring with things like Hebrew and Greek to learn; better go off and do something else in one’s first year and then come back to do just Part II in Theology. He was a bit put out when I replied that it was precisely the languages that interested me (I had done modern languages for A-level), and so as a consequence of his policy I was the only first-year undergraduate reading Theology. Thus the award of the Dealtry Prize was more or less a foregone conclusion. And in retrospect, I am proud to have that name on my CV.

I need hardly say, however, that in recent years the quality of life of some other benefactors has come under critical scrutiny, the outstanding example being Cecil Rhodes of Oriel College, whose statue high above anyone's normal sight line overlooking the High Street in Oxford was quite unobserved by me until an almighty row blew up led by some, including some Rhodes scholars, who wanted it removed because of his behaviour in South Africa and neighbouring regions. This has led to comparable demonstrations at Bristol University, for example, in relation to Edward Colston, whose munificent benefactions were the result of his profitable engagement in the slave trade. It would not be difficult to find parallels here at Trinity.

To a student of the Hebrew Bible/Old Testament, this kind of tension is hardly new. It goes back at least as far as Marcion in the second century, and one may sympathise with his initial problem even if his solution was wide of the mark. You see, the founding national narrative of the people of Israel has Abraham as a sort of illegal immigrant (if you will allow a complete anachronism for days when there were no nations in Palestine or borders round it). According to the story, he and his family after him exploited the economic potential of the land but his only purchase was of a place to bury his wife. He drove out his maidservant and the child she bore him, bringing them close to death in their homelessness, and he nearly murdered his other son by his wife as well.

Centuries later, when the people of Israel came out of Egypt where they had long settled as refugees, they were led into the land by Joshua with what amounts to a specific divine command to commit ethnic cleansing in order to take possession of the promised land. They did not fully succeed in their commission but the text regards this as a blameworthy failure on their part, not a cause for slight relief. It is no surprise that it is sometimes difficult to disentangle uses of the main Hebrew verb in this connection between 'inherit' and 'take possession by conquest'. So, while the modern concept of a benefaction was unknown to these ancients, there can be little doubt that from one perspective the theological appraisal of the history of Israel would not pass muster as a modern, politically correct inheritance.

Of course, this one-sided presentation needs to be balanced with some equally prominent apologetic considerations. Most historians now are rightly very dubious about the extent to which any of these records can be trusted as accurate accounts in twenty-first century terms. Instead, we are learning to read the stories of conquest in Joshua as the mirror image of the much later Assyrian and

Babylonian intimidatory propaganda as a way of bolstering morale at times when Israel and Judah were under severe threat from those imperialistic powers. Again, the extended narrative that begins with Israel outside the land and coming in to take possession comes to its close with the people back outside the land again in deportation and exile, so that their possession is far from unconditional. Rather, it remained dependent on their religious and moral faithfulness to God, in both spheres of which they fell short, as the historians and the prophets alike attest.

Similarly the stories of Abraham are told as a paradigm of faith, not a blueprint for economic cunning. Strange as it may seem, Abraham is not mentioned in any of the literature that has reached us from the centuries of the Israelite monarchy but only later, when the people are again estranged from their land in exile and longing wistfully to return. He becomes a symbol of faith in divine promise and guidance to all who are themselves dispossessed and lacking hope. And in psalms and other recitals the failures of previous generations could become the well-spring of renewed faith and determination:

He is our God; and we are the people of his pasture, and the sheep of his hand. Today if ye will hear his voice, harden not your heart, as in the provocation, and as in the day of temptation in the wilderness: when your fathers tempted me, proved me, and saw my work. Forty years long was I grieved with this generation, and said, It is a people that do err in their heart, and they have not known my ways: unto whom I swear in my wrath that they should not enter into my rest. (Ps. 95:7–11)

I do not for a moment pretend that we live in a comparable society, and as an academic I am bound to want to hedge all such comparisons about with caveats, cautions, and reservations. But when all is said and done the Hebrew Bible can perhaps invite us to think about ways in which our present behaviours and values may in some way help to redeem an imperfect past, to learn from it as we pledge to do better rather than naively suppose that we can reject it in some grandstanding gesture which is ever only partial and inconsistent, and to accept with gratitude where we are because of those who have preceded us without that implying that we are comfortable today with their values of yesterday.

Trinity here and our sister college in Oxford, Christ Church, where I spent 22 very happy years, share some things in common, not least that Henry VIII took over previous institutions and made something new, endowing each quite

munificently with money which he acquired in ways which we might prefer today not to delve into too deeply. We are where we are, thanks to him, to Jeston, to Dealtry and a myriad others, and our response is surely to build better on the foundations they have laid rather than picking a quarrel with those who have long since died. If we do not, who knows what a future generation will make of our own present-day efforts to fundraise in the abiding interests of (to quote) ‘contributing to society through the pursuit of education, learning and research at the highest international levels of excellence.’



Troy Davis

**Wesley Kerr OBE (1976) proposed the health of the College at the Commemoration Feast, 15 March 2019**

Master, Distinguished guests, Fellows, Benefactors, Scholars and Members of the College of the ‘Holy and Undivided Trinity.’ It’s always great to return; 40 years since I last attended the Commemoration Feast. In 1977 and 1978 it made such an impression on me that I still have the menus. Soup, fish, beef, ice

cream in both years. *Semper eadem*? So not quite always the same ... the menu has definitely changed. The food has been delicious tonight and the hospitality has been magnificent. So many thanks to the College and its incomparable, hard-working staff.

The great gates of memory are opened in this magnificent hall, onto the cobbled courtyards and hallowed portals where Isaac Newton cogitated, Ramanujan made his mathematical breakthroughs, and Lord Byron kept his tame bear in rooms on the other side of Great Court; he suggested the bear should sit for a Fellowship!

Time passes through Trinity like an ever-flowing stream, connecting us with all those who have feasted, taught and studied here in the 702 years since King Edward II housed the King’s Scholars on this site; which became King’s Hall and Michaelhouse. And it’s 473 years since this college was founded by Henry VIII a few weeks before he died, having sinned greatly and wishing to be remembered eternally.

But actually it was women who made Henry's wishes real. His sixth and relatively lucky last wife Queen Katherine Parr at last now has a portrait in the west oriel window. It was her advocacy that led Henry to found Trinity (and its little sibling, Christ Church, Oxford). And we owe much of our huge endowment to Henry's daughters, the first two women to rule England in their own right. Not Margaret and Theresa, but Mary I and Elizabeth I. *Semper eadem* was Elizabeth's motto. It's good to commemorate our first female benefactors.

I'm pleased that in my current role as a Trustee of the charity running London's eight magnificent Royal parks I am partly responsible for Greenwich Park, still in its 1433 boundaries, which housed the Tudor Palace of Placentia, the birthplace of Henry, Mary and Elizabeth, and where we are planning a £10 million restoration project which will help tell their stories and restore the Baroque landscape.

You cannot pass through or live in Cambridge without realising what an asset to any city are beautifully presented, freely accessible green spaces.

The big historic development during my time at Trinity was the welcome arrival of women undergraduates. In 1978 they could all fit on one refurbished staircase – so they didn't have to cross a court for a bath; now they are a third of the College.

“Always the same” may be how this great college appears but beneath the immemorial surface, like all great institutions it constantly changes and adapts to society and the educational marketplace. But every one of us – every one of you – changes Trinity, through your presence, accomplishments and as life members of the worldwide Trinity family network; all 15,000 of us.

My arrival here as an Entrance Scholar in October 1976 was something of a first – the first member of either my birth family or my foster family to go to university, and a rare black Briton amongst the undergraduate intake here. Despite this accent I was not your typical Trinity man.

The distinguished journalist Charles Moore has written “At my Cambridge college in 1976 arrived an exotic black youth called Wesley Kerr. It was put about that he was the illegitimate descendant of a duke, but this was almost certainly not true.” I can confirm that no duke was visiting Guava Ground in rural Jamaica sometime around Christmas 1957. Indeed my actual father is back there now on the smallholding that the family have occupied since the abolition of slavery. My mother came to England in 1958, aged 17 as a trainee nurse but was thrown off the course when she was discovered to be pregnant.

My paternity was questioned again a few years later, in 1994, visiting Jamaica as a Royal Correspondent to cover a three week Caribbean tour with Her Majesty the Queen, who asked me in response to another rumour; “how many children does your father have Mr Kerr?”

Someone came up to me at a party recently and said there were famously six things about you that were unusual in that Cambridge intake. You were black, illegitimate, Catholic, a foster child, gay and with four nipples! Most of this was almost certainly true and I can say that in my time here and in decades since as a broadcaster, journalist and cultural policy maker I have benefitted enormously from the open and accepting atmosphere I experienced here. The embracing of difference and individuality, the constant conversations, the free flow and testing of ideas. The time to read, think, listen and write, the amazing friendships that began here. And paradoxically, because it’s such a big college, the chance to be alone and do your own thing both academically and through clubs and societies.

It was great fun making speeches at the Union Society alongside many who are now in Parliament. Meeting leaders like Indira Gandhi, Margaret Thatcher and Benazir Bhutto. Helping launch a magazine, Rampage. Seeing a golden wave of movies, and Footlights performers like Stephen Fry and Emma Thompson; having 40 people to dinner in D5 Whewells Court, with chicken paprika cooked on a single gas ring, costing £10 and lasting till 4 am.

They were three wonderful years studying history with some of the great dons of recent decades; the late Walter Ullman, a refugee from Nazi Austria and the world expert on the medieval Papacy; the late Roy Porter, the foremost medical historian; the colourful Norman Stone. In particular I would like to thank my brilliant Director of Studies Professor Boyd Hilton, whom I saw this afternoon; and present tonight is an expert on modern African history, a man whose judgement is so good he admitted me – the magisterial and wonderful Professor John Lonsdale.

Gratitude also to the incomparable Master, Lord Rab Butler with whom I had many one-to-one talks on politics and history, and who had launched as Education Secretary in the 1940s a radical programme of county bursaries which paid for poor students like me to go to great public schools like Winchester College – for free. And very fond memories of his charming wife Mollie who hosted outstanding parties and concerts in the Lodge.

Trinity was a fantastic preparation work for BBC broadcasting and written journalism. A career of sudden spurts of hard work, quick assimilation of complex concepts, and turning them into simple language. As EM Forster said about people and ideas; “Only connect.”

It is so long ago I started in TV that there were only three channels and we recorded news on film. I never did become Prime Minister of Jamaica, as Rab Butler, on graduation day told Mother Teresa and Prince Philip was my ambition. The Duke guffawed and rightly said,

“Why ever would you want to do that?”

Instead I was lucky enough to report from forty countries on six continents. News, current affairs, social policy but also travel, the history of plants and places and what I tend to write and speak about now; the UK’s and London’s amazing cultural and heritage scene. “Much have I travelled in realms of gold.”

Principles learnt here helped me decide which projects to nurture with heritage lottery grants. Watching hundreds of millions of pounds in investments transform museums, parks, revive memories, create employment, uplift individuals or entire neighbourhoods.

Back in 1977 I wrote a feature for *The Times* entitled ‘Cambridge a mixture that should not remain as before’ and it has not stood still. The College is a great deal more diverse. 64% of Cambridge undergraduates are now from state schools, as opposed to 41% in my day. Amongst 213 undergrads now in their first year at Trinity are 41 different nationalities. Of those based in the UK, 30% identify from an ethnic minority, although not so many from black African/Caribbean backgrounds – and I wonder how well-represented are what one might call the white working class? But it’s great that there are so many initiatives to make access fairer to those with ability and intellect. Initiatives from the College, the University, from financiers, even from a well-known rapper.

Trinity needs a mix of all the talents. We’re inspired here by the genius of place, and this is a place of geniuses. Nobel prizes will continue to flow. 33 and counting. It is an amazing fact that a quarter of all the UK’s Nobel prizes have gone to Trinity graduates. This college has more Nobels, not than France as Rab Butler used to claim, but more Nobels than Russia, India, China, Italy, Sweden. So congratulations to Sir Gregory for his pioneering work which has saved many lives, who on December 10th last year received his Nobel Prize for Chemistry.

It is exactly 100 years since a Royal Commission recommended that the Mastership should cease to be a lifetime appointment and also 100 years since PhDs were established. This is the last time Sir Gregory will preside at the Commemoration Feast and we thank him for all he has done for the College.

I won't forget tonight. I still remember the impact as a 16 year old of walking into Great Court for the first time on a very wet day in May 1975, and thinking "this is the place for me."

To quote our Latin motto in English – *Virtue is true nobility*.

I would like to propose a Toast to this really great institution, the most remarkable college in the finest university in the world. To Trinity.



Graham Cope/Koga

**Response on behalf of the College  
by the Master, Sir Gregory Winter, 2019  
15 March 2019**

*I would first like to welcome Mr Wesley Kerr (1976, History) and his guest Mr Greg Hayman. Wesley developed a career as a historian, broadcaster and writer, and has served as Chairman of Heritage Lottery Fund's (HLF) Committee for London, playing a major role in awarding grants totaling tens of millions of pounds for heritage-led regenerations of parks, landscapes and gardens across London. One of the more recent projects is London's Brompton Cemetery of which Wesley remarked "I never thought I would spend so much time in a cemetery... at least not at this stage of my life!" Wesley, welcome to our mini-podium.*

Wesley, thank you for your speech, your toast to the College and your congratulations to me. My thanks also to Professor Hugh Williamson (1966, Theological & Religious Studies) for his address in Chapel and reminding us not to pick a quarrel with those who have since departed. Indeed at this Feast we commemorate benefactors of dubious character from Edward II to Henry VIII and beyond, and I hope that we will continue to do so for their contribution to the College.

At this feast we also gratefully acknowledge those benefactors still living. Three years ago we created a class of members called Fellow Benefactors, to acknowledge acts of great generosity to the College. Once admitted in Chapel, the Fellow Benefactors have many of the privileges of Fellows, including attending feasts and walking on the lawns. Today in Chapel we admitted three Fellow Benefactors: Mrs Elizabeth Dunlevie, Dr Tom Howat and Mr Simon Keswick. We would also have admitted Simon's brother, Sir Henry Keswick (1958, Law), had he been able to come this evening.

First let me welcome Elizabeth Dunlevie and her husband Bruce Dunlevie (1977, History), who was himself admitted as Fellow Benefactor in 2017. The Dunlevies are great philanthropists who have supported the College for many years, establishing the Dunlevie Fund in 2003, which supports the cultural, sporting or extra-curricular activities of undergraduate students during the vacations, making it possible for many students to travel abroad under various pretexts. And in 2017, in the 700th year of the establishment of the King's Hall, they created the Dunlevie King's Hall Studentships. These are aimed at students studying for Master's degrees at Cambridge, with a preference for those in the Humanities or Social Sciences. Thank you Elizabeth, and thank you Bruce for your great and continuing generosity!

I would like to add that in the United States Elizabeth supports a children's Hospital at Stanford University, and has provided a garden with life-size sculptures of native animals, of bears, tortoises and sea lions to entertain the children. Elizabeth, you are so far ahead of us! A year ago the College took its first faltering steps in this direction, and installed some garden artwork on the Backs to entertain the geese. These took the form of two plastic coyotes frozen in the act of defecation; fortunately they were stolen.

I would now like to welcome Dr Tom Howat (1999, Mathematics) and his partner Mr Tom Amraoui. After Trinity, Tom became Chief Technology Officer of Cantab Capital Partners, a hedge fund manager that uses state of the art technology, and scientific and mathematical models to deliver attractive risk-adjusted returns. The company has an iconoclastic view of the world, their research is based on the scientific method, and is hypothesis – rather than data – driven. In 2016 the company was acquired by the Swiss asset manager GAM, but continues to operate what Bloomberg News has called the “Brain-Box Fund”. In 2018 Tom made a significant gift to the College to establish the Tom Howat PhD

Studentship in Mathematics. Tom thank you for your gift – and thank you to the Swiss controllers who let the Brain out of its Box to dine with us this evening.

I would now like to welcome Mr Simon Keswick (1961, Economics and Law) and his wife Emma. The family business was Jardine Matheson, one of the original Hong Kong trading houses or Hongks that date back to Imperial China. Simon and his brother Henry worked for many years in shaping the business, both as Tai-pans and as Board members, and it has been a great success. In 1982 the brothers Keswick set up the Jardine Scholarships for students from Asia coming to certain Colleges of Oxford and Cambridge Universities, from which pool Trinity has derived several outstanding students. All of which makes the brothers Keswick jolly good sports, as the University through its examinations processes had failed to spot their true potential. It has to be said that, perhaps, Simon had spent too much time at Newmarket. I am told that Simon's filly won the 1,000 Guineas in 2013 and the first yearling sold topped the Newmarket sales, so he must have learned something at Cambridge, if only about Newmarket. Simon thank you for your support of the College and the University over many years.

I would now like to introduce and thank other guests who have made significant donations to the College; Ms Selena Sun (1995, Law), with husband Patrick Mr Tsang; Mr David Manns (1964, Mathematics) in memory of his late wife Christine; and Ms Winnie Kwan (1991, Economics). Winnie has also been energetically strengthening the College's links to Asia, and her guest tonight is Mr Fan Bao, the Founder and CEO of the bank China Renaissance. It is an honour to have you all here this evening – thank you for coming.

I would also like to thank other guests who have also been helping the College or our alumni associations in a variety of ways: Mrs Camilla Mash (1983, English) and husband Julian, who have supported our students and hosted an alumni event; Ms Sonum Sumaria (2008, Law), who makes films about vulnerable communities around the globe and is now making a film about the College; Dr Matthew Russell, the Head of the Office of Intercollegiate Services, who is helping us deal with consultations, regulations and duties imposed on the College by HM Government; Mr Hardeep Nahal (1982, Law), here with his wife Janet, and who has served many years on the Committee of Trinity Law Association and is the outgoing Chairman; and Mrs Ellie Davies (1999, Theological and Religious Studies), here with husband Rhys (1997, Law), and who was Founder and Chair of Trinity Women's Network, which organizes

events to celebrate the successes of women, lest we forget. Which reminds me... this academic year we do have a lot to celebrate. It is the 40th Anniversary of the arrival of the first cohort of undergraduate women, and the election of the College's first female Master.

Last year donations from our alumni amounted to the astonishing sum of £27.6M, so thanks to all those alumni who supported us. However donations represent only a part of our income, for the rest we rely on investments.

One such investment is Cambridge Science Park. The College has never seen the Science Park as a purely business proposition. We aim to encourage the growth of new companies and technologies, and to turn University research into real world application. For this we need a business ecosystem with a mix of companies at different stages of their life cycle: we need some coming and some going, some growing and some stable, some predators and some prey, and some births and some deaths.

You may remember that the College is building a Bio-Innovation Centre for growing Life Sciences companies. For this purpose we are working with Tsinghua University Science Park Holdings (TUS-Holdings) and I am glad that Mr Kevin Lin of TUS-Holdings can be here as our guest this evening. Last July we had the topping out ceremony for the building, and we expect the Bio-Innovation Centre to be occupied by the end of this year. You may also remember that the College has already built the Bradfield Centre to grow technology companies. The Centre is now operational and occupied with 83 tech companies, and has become a thriving entrepreneurial hub.

As well as growing companies, we also want to create new companies on our Science Park. Last summer, we set up a prize competition for postgraduate students and young researchers. We offered prizes of cash, mentoring and space at the Bradfield Centre to help the more entrepreneurial types in spinning out companies from their research. Mr Ravi Solanki, a Trinity research student, helped orchestrate the competition, for which our thanks. The competition was a success and we will repeat it. But we can't just rely on the spirit of free enterprise to descend on researchers like some Pauline conversion. So we are also sowing the seeds of an entrepreneurial faith by supporting summer internships for our undergraduate students in Science Park companies.

What happens on our Science Park may also have a bearing on an important issue that has been raised by our students – namely whether, in the light of

climate change, the College and the University should divest themselves of their shares in fossil fuel companies. There are many questions this raises, including whether the exclusive focus on fossil fuel companies is fair, and whether College divestment would have much impact on their operation or on the College's investment returns? Without anticipating how the College will resolve these matters, a complex matter I leave for the Senior Bursar and the next Master, I believe that the College's best instruments for making an impact on climate change are through our students, our Fellows and through our Science Park. We can, for example, try to encourage the research and business of alternative energy, energy efficiency, energy storage, and carbon fixation. In fact the two winners of the Bradfield Prize last year are already working on improving the energy efficiencies of batteries and of gear shifting in electric cars.

I am sorry to report that the Angel of Death has been consuming our most distinguished and gifted members of the College, particularly mathematicians and economists. In January 2018, it took Alan Baker, mathematician and Fields medalist; in August it was Sir James Mirrlees, Nobel Laureate in Economics; in November it came for Sir Aaron Klug, Nobel Laureate in Chemistry and former President of the Royal Society. And in December it took both Professor Robert Neild, economist, oyster connoisseur and scourge of the College Council and Junior Bursars, and Sir Peter Swinnerton-Dyer, mathematician, co-author of the Birch-Swinnerton-Dyer conjecture and scourge of failing Universities. In January 2019 it came for Sir Michael Atiyah, former Master, former President of the Royal Society, mathematician and Fields medallist, and in February it was the turn of Dr Simon Norton, mathematical prodigy and rural bus campaigner, who according to the *Guardian* newspaper was "sometimes mistaken for a homeless man". I hope the Angel now has indigestion. This has been a depressing period, enlivened only by the fire of burning bras on the A14 that made Robert Neild late for his own funeral, and by the oysters and champagne afterwards by which he chose to be remembered.

To cheer us up I would now like to offer a few congratulations. Congratulations:

- to the incoming President of Trinity College Students Union Emily Song and team on their election, and thanks to the outgoing Molly O'Brien, and team for their work over the last year. Likewise to the BA Committee President Isabel Vallina-Garcia and team who remain in position until the middle of next term.

- to our scholars. Last year Trinity men and women put in an excellent performance in examinations. But we were pipped from our pole position by Christ's and Pembroke. I trust that this year our scholars and teaching Fellows will do their best to correct this aberration in the natural order of things. In fact our computer scientists and mathematicians are already leading the way – in a national programming contest last year three Trinity teams secured the three top places against 150 undergraduate teams across the UK.
- to our Fellows Sean Curran on the Albert Einstein Award by the American Musicological Society, and Ewa Paluch on the Blavatnik Award in the Life Sciences;
- to our alumni Sir Laurence Bristow for his knighthood for services to British foreign politics, Sir David Natzler for service to parliamentarians, and to Catherine Arnold on being elected as the next Master of St Edmund's College Cambridge.
- to our rowers in the 2018 Boat Race. Last Spring I went to Putney to see the race. There were Trinity men and women in all four Cambridge boats, and I was lucky enough to witness their triumph. Imogen Grant not only rowed in the Women's Blue Boat but went on to win a bronze medal at the world rowing championships. This year our men (Charlie Marcus, Reggie Mitchell) have made it into the Cambridge squad and we wish them good luck on the day.
- to our other sportmen and women on their Varsity victories; in ice hockey to Christoph Kehle; in women's gymnastics to Molly O'Brien lately TCSU President; and in Women's Lacrosse to "Straight Attack" Lara Dillingham.
- to our athletes who in their annual fixture beat Christ Church, our Oxford sister College. This year the Dean of College was not surprised by the naked members of Christ Church in Great Court at midnight. And in the Lent Bumps congratulations to the First Men's VIII – it moved up three places in Division 1, and to our Second Women's VIII – it went down six places in Division 3, getting the wooden spoon in great style.
- to the choir on their latest CD of music by former Organ Scholar Owain Park, which has been nominated for BBC Music Magazine

Choral Disc of the Year; their performance of Bach's Christmas Oratorio at St John's Smith Square, in which the reviewer wrote "Trinity College Choir was the star turn, sublime in the chorales", and this evening in Chapel and in Hall.

I hope that you have all enjoyed the Feast. The next Commemoration Feast will take place under our new Master, Dame Sally Davies. I have already picked up concerns that under the new regime Feasts will become calorie controlled and alcohol-free events. I would like to be able to reassure you that the Master has little power over such matters, but Dame Sally is one of those forces of nature...

Finally I would like to end this Feast with a comment from our late Master Sir Michael Atiyah. He said that Trinity College is a catering establishment with academic pretensions. I think it was meant to be a compliment to the catering staff rather than a put-down of the Fellows. Certainly this evening our catering and serving did us proud. Thank you!

Please stand for the toast in memory of our Benefactors: "In Piam Memoriam Benefactorum".



**Dr Andrew Harter CBE FEng  
High Sheriff of Cambridgeshire**

**Armistice Centenary Dinner  
Trinity College**

**November 10th 2018**

Lord Lieutenant, Sir Gregory, General Wooddisse, distinguished guests, ladies and gentlemen. I am not only the High Sheriff of Cambridgeshire, but also an engineer, inventor and entrepreneur, and Vanessa\* asked if I might round off the evening with a few words about innovation and the First World War.

Back in July, the 2018 Reith Lectures were brilliantly delivered by historian Margaret MacMillan. She used the lectures to examine the relationship of war

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\*Dinner organiser Vanessa Burkitt, who is a supporter of the Royal Anglian Regiment and its benevolent fund.

to civilisation. The lectures are hugely thought-provoking yet approachable, and are available on the BBC Radio 4 website if you want to catch them, which I highly recommend.

In the first lecture, Professor MacMillan asks if war is an essential part of being human, and explores the tangled history of conflict and society, and the capacity for war to bring about change. There is no better example than the role and status of British women as a result of the scale and impact of the First World War on British men, and it is no coincidence that this year is also the 100th anniversary of the Representation of the People Act, which gave women the right to vote for the first time.

But war involves technological and industrial change too, whether deliberate, accidental or as a by-product. It also occupies the minds of the great thinkers; Archimedes and Leonardo da Vinci both spent a great deal of time devising machines of war and defence, which spilled over into their other world-changing inventions and discoveries. The beginning of the last century was the dawn of our modern age, with transformational discoveries and inventions in electricity, radio, chemistry, physics and medicine.

The First World War was played out in that context, and it is unsurprising that technical developments influenced the ebb and flow of the war, and that the demands of war drove invention.

And what better place to consider this than here in Cambridge, and in Trinity College that has for centuries produced legions of influential mathematicians and scientists. Many of these have gone on to be Nobel Prizewinners, and we cannot let the opportunity pass to congratulate Sir Gregory, who just a few weeks ago was awarded the 2018 Nobel Prize for Chemistry.

This makes Greg the 33rd Trinity Nobel Prizewinner. Go back 103 years to the 5th in the list and you find Sir Lawrence Bragg, who had a profound effect on the First World War. He was a brilliant mathematician and physicist who pioneered the field of X-Ray crystallography for which he received the Nobel Prize in 1915. This was just after he had taken a commission in the Royal Horse Artillery, transferring shortly after to the Royal Engineers. At just 25 years old, he is the youngest ever Nobel Prize winner. More remarkable still, he was awarded the Prize together with his father Sir William Henry Bragg, making them the only father and son winners. You may not be surprised to know that Sir William was also a Trinity man, making him the 4th in the list by virtue of seniority!

But it wasn't Braggs' X-ray crystallography that changed the war. In the Royal Engineers, Lieutenant Lawrence Bragg was asked to devise a gun-ranging device to allow enemy guns to be targeted more accurately. He did this with an ingenious system which could measure the speed of the sound wave caused by the firing of the gun and calculating the difference from the speed of the sound of the exploding shell. He was assisted by Charles Galton Darwin, also a Trinity College mathematics graduate, and grandson of Charles Robert Darwin. Together they further developed the system into an array of receivers, enabling direction to be estimated also.

By the end of the war, enemy artillery could be located accurately to within 25 metres, which without doubt made a seminal contribution to ending the conflict. What's more, the techniques and calculations behind this system went on to influence sonar, radar and many of today's communications systems. For his work during the war, Lawrence was awarded the Military Cross and appointed an Officer of the Order of the British Empire, and was mentioned in despatches in 1916, '17 and '19.

Sir Lawrence Bragg is buried here in Trinity, one of the College's most distinguished members.

The City and University of Cambridge also made a significant contribution to the medical treatment of the wounded, and to medical practices and procedures in the field.

The First Eastern General Hospital was set up within a few days of the outbreak of war, and treated many tens of thousands of returning casualties between 1914 and 1919. The hospital was on the Backs, where the University Library now stands and was a collection of pre-fabricated wooden huts, with nearly 2,000 beds, operating theatres and ancillary buildings, a Post Office, shop, cinema and other recreational facilities.

The First Eastern's open-air wards pioneered the curative use of direct sunlight and saline baths in the treatment of severe injury and burns, a decade before the advent of penicillin. There were many other success stories.

The use of splints to stabilise fractures and prevent infection was another idea adopted and improved in Cambridge. An untreated fracture was one of the biggest causes of mortality and, at the beginning of the war, 80% of those with fractures died.



Dr Andy Harter CBE (right) in conversation with General Wooddisse (left).

The Thomas splint revolutionised the manner in which men injured in the First World War were treated. It was originally designed by the father of orthopaedic surgery, Hugh Owen Thomas, but it was his nephew, Robert Jones, and others in Cambridge who appreciated its importance. By the end of the war, 80% of those with fractures survived, and hundreds of thousands of men were saved.

Those that did survive often faced long periods of recovery and convalescence. Robert Tait McKenzie was a Canadian who came to England to enlist with the Canadian Forces but, realising he was a doctor, the commanding officer immediately transferred him to the Royal Army Medical Corps, and he spent time at the First Great Eastern. He took a particular interest in rehabilitation, and devised many practices and inventions which were rolled out across the country, and his methods laid the foundations for modern physiotherapy. McKenzie was also a talented sculptor, and after the war he marked his fondness for Cambridge by creating the War Memorial on Hills Road where an act of remembrance will take place tomorrow.

It was the British Army that began the routine use of blood transfusions to treat wounded soldiers. Blood could not be stored without clotting, and so had to be transferred directly from one person to another. The use of sodium citrate to

prevent coagulation was independently developed in England, Germany and the US in 1916, but the techniques and methods developed in Cambridge led to the first blood bank being established on the Western Front in 1917. Blood was kept on ice for up to a month and then transported to casualty clearing stations for use in life-saving surgery where it was needed most.

For a time, the grounds of Trinity College itself were used as a hospital ward. Exit the doors at the back of the Hall and turn right into Nevile's Court, and 100 years ago you would have seen a tented village. In addition, volunteer nurses and doctors were billeted in empty College rooms, and khaki-clad officers dined at High Table, sparking discussions with Cambridge scientists and medics in that uniquely Cambridge way. And so the College's involvement came to symbolise the linkage between inventions born out of necessity and the academics who refined them.

The First Great Eastern also had a considerable impact on local trades, businesses and suppliers – part compensation for a greatly diminished student population.

One such business was owned by David Marshall, a former Trinity College Chef. By the time WWI broke out, David had already branched out and established a garage selling, hiring and servicing motor cars in Jesus Lane, just round the corner.

For five years the tranquil Backs were transformed by a relentless stream of horse-drawn and motorised ambulances transporting patients to and from the railway station, deliveries of food, coal, medical supplies and laundry, and for those who could afford it, taxis ferrying thousands of visitors.

And this was the opportunity for the young entrepreneur David Marshall, who went on to build one of the region's largest and most successful businesses with diverse interests in the motor trade, engineering and aircraft industries, which still thrives today under the leadership of his grandson Sir Michael Marshall and great grandson Robert Marshall, and I am delighted that members of the Marshall family are here this evening.

There were further opportunities for entrepreneurs after the war ended too. The Mason brothers used their demob money to found Fitzbillies, the famous cake shop on Trumpington Street. It is still there and still sells their famous Chelsea buns made to the original recipe. These have been a source of inspiration to many over the years, and indeed Ernest Rutherford, another Trinity Graduate and Nobel Prize winner (number 3 this time!) served them at the weekly tea



Officers, medical staff and orderlies staffing the 1,700-bed First Great Eastern Hospital who treated the wounded from the Front were billeted in Trinity, 1918.

party that he and his wife hosted in the laboratory. The oft quoted story is that the currants in concentric rings of pastry were the inspiration for the shells of negatively charged electrons surrounding the positively charged nucleus in the Rutherford model of the atom. The chronology makes this unlikely, but it makes for a good story.

There are far too many inventions and discoveries, Cambridge or otherwise, that influenced the war, or were born out of it, and we can't mention them all. But they include stainless steel, tanks, zips, sun lamps, wrist watches, daylight savings time, tea bags, sanitary towels, air traffic control, portable x-ray machines, drones, vitamins, paper tissues, plastic surgery and prosthetics.

And Cambridge is still at the forefront of innovation that has global impact, in machine learning, communications, genetics, healthcare and drug discovery. Every phone in the world has one or more chips designed here at ARM, as do most tablets, cameras and consumer electronic devices, and Sir Gregory's Nobel Prize was for work that led to Humira, the world's bestselling drug used to treat arthritis and other inflammatory conditions.

I will finish, if I may, with a personal story.

My grandfather William was born in 1896. He signed up to the King's Own Yorkshire Light Infantry when he was just 18 and fought first with the 2nd Battalion in Flanders at the end of 1914.

He went on to fight at the second battle of Ypres in 1915, which saw the first mass use of poison gas. He was one of the first to suffer, and was invalided back to England where he spent six months convalescing and recuperating. His lung function was reduced to less than half, but he was determined to return to the Western Front and somehow managed to pass a physical. He fought with the 9th Battalion at the battle of the Somme in Autumn 1916, where this time he was seriously wounded by shrapnel from an exploding shell. He was again invalided back to England where his wounds finally healed, but the shrapnel was never able to be removed. Incredibly, he was deemed fit again and went back to fight for a third, and final, time at the Battle of Passchendaele.

And so I am enormously proud at this special anniversary to wear his medals; the 1914–15 Star; the British War medal; and the Victory Medal, popularly and affectionately known as Pip, Squeak and Wilfrid after three characters in a comic strip of the time (a dog, a penguin and a rabbit).

What makes this more poignant is that he gave them to me shortly before he died in 1986 at the ripe old age of 90, having been an inveterate smoker of Capstan full strength cigarettes, and exhibiting remarkable longevity given his damaged lungs.

I was older then than he was when he went to war, and I could not then, and I cannot now, imagine the bravery and sense of duty of that young generation.

We talked from time to time about his experiences, often after a glass or two of something at Christmas time. Like most, he did not want to re-live the horrors that he had encountered, and about this one received a simple factual account at best. When he did become animated, and with a twinkle in his eye, it was about the enduring bonds of friendship and camaraderie that for so many characterised their experience, and became the residual memory as the nightmares of war faded.

The First World War is without doubt one of the most indescribably brutal and horrific times in human history; indiscriminate and unforgiving. But for those that survived, and there were many just as lucky as my grandfather, it was



The Lord Lieutenant of Cambridgeshire Mrs Julie Spence OBE QPM, General Ralph Wooddisse CBE MC Colonel of the Regiments, Sir Gregory Winter Master of Trinity College, Dr Andy Harter CBE High Sheriff of Cambridgeshire, serving soldiers and veterans of the Royal Anglian Regiment and guests.

also an incredibly special and intense time the likes of which they would never experience again. So in our thoughts tomorrow, let us also remember those that returned, because they brought hope.



## The Master's Speech at the Midsummer Dinner, 6 July 2019

It has been my honour, duty and often pleasure to be the Master of the College of the Holy and Undivided Trinity. Even its name, and its history, founded and endowed by Kings and blessed by Queens, help capture something of that early weave of Church and State – and the protective cloak this has afforded to the education, religion, learning and research that takes place within.

As Master, I have sometimes felt like the custodian of a precious relic from the medieval world with its hierarchies – the Master, the Council, the Fellows, the Scholars, and Staff – and its eternal cycles of matriculation, feasts, evensongs, memorial services and graduation. Like the medieval world, each individual has a place, whether as Senior Tutor, Junior Bursar, Porter, Cook or Gardener. The Master also has a place, but unlike other members of the community has no formal job description other than a few lines in the Statutes.

Early on in my Mastership, I realized that although the College is an ancient and venerable institution, it is also a complex and successful organism that has adapted itself to educating scholars under worldly pressures and the dialectic between Fellows over centuries. In this Lamarckian perspective, I did not believe that the College was either perfect or was adapting fast enough to the world around it. Although we don't know the shape of things to come, I felt it was important for the College to acquire new capabilities and be ready to adapt to both short-term events and long term trends.

I was therefore pleased to have had a hand in some important changes during my time as Master, including greater engagement with our alumni, and greater support of early stage companies and the postdoctoral community. Any one of these areas may, in the fullness of time, lead to a new capability for the College, and open up new pathways for our future evolution. I was sad that one change, that of our USS pension arrangements, occupied my last year and last days as Master. During the recent College meeting to discuss this, I began to think that the meeting had been intended as some kind of Viking funeral, put on by the Fellows to mark the passing of its Master, but before he had fully passed away.



James Appleton

Finally, I would like to thank the many Fellows, families and Staff for their courtesy and kindness to me and to Marina during my tenure as Master. I have been fortunate to work with some fine people among the officers, Fellows, staff and students. I won't embarrass them by mentioning their names, except for the staff of the Lodge who by now should be immune to being embarrassed by me. I would therefore like to thank:

Paul, for keeping the Master's Lodge so thoroughly cleaned, polished and gleaming;  
 Elspeth, who arrived after three temporary secretaries like a beam of sunshine,  
 good humoured and competent;

Aga, for keeping the Master's flat and laundry spotlessly clean, and spoiling him  
 for the afterlife when he will have to do much of that himself;

and Joy who has turned the Master's Garden into a paradise and had she been much  
 older could have taught a thing or two to Gertrude Jekyll about herbaceous borders.

Thank you all for everything, and I hope to see you afterwards in the Garden.



### From the new Master – Dame Sally Davies

When I was visiting Trinity College in the spring soon after my election by the Fellows, I was blown away by the LGBTQ+ garden, that Tom our head gardener had grown. Beauty may be in the eye of the beholder but what originality and hard work was on show – a metaphor for our Most Holy and Undivided Trinity!

This will be my first year as Master of Trinity – I am honoured to be joining the College and I look forward to working with the Fellowship, our staff and alumni so that all can make their best contribution to College. A strong Trinity will help to ensure that Cambridge is the world leading university.

I am determined to make sure that Trinity continues to thrive. I recognise though, we live in a turbulent and changing world with politics shifting daily, fracturing relationships at home and abroad. These are challenges but also there are threats to universities: independence, funding and the diversity of our students to name a few.

As Bob Dylan said ‘may you have a strong foundation when the winds of change shift...’ and at Trinity we do have those strong foundations – they are based on our academic excellence which has been built over 473 years. We can and will address these challenges, with our response to all these and more being to strengthen the Trinity Community as a whole – and all the time working with our outstanding staff – without them Trinity would not be Trinity.



Joanna Cooney

The LGBTQ+ garden in bloom.

My election as the first female Master and also the first non-Cambridge graduate is, of course another manifestation of these ‘winds’. I bring the freshness of an outsider and a lifetime of piloting a course through stormy, difficult times, with long experience as a public servant: initially as a doctor working in Brent – a deprived part of London – as a clinical academic, and then with government establishing the National Institute of Health Research. For most of the last decade I have been the country’s Chief Medical Officer. I have stood calm in the eye of ‘storms’ and steered a course of reality and safety for the public.

I have always been a collaborator, and worked in and with teams, so it will be in this spirit that I will lead. I am open and eager to learn – and if you see me looking lost please do help, and direct and advise me!

We will work to attract the best students from as broad a social and geographical base across the UK. This will need more outreach with new approaches and new funding, which I commit to helping raise. Trinity's outstanding teaching attracts the students who know the College but now we need to raise the ambition of those, equally strong academically, who have not known or dared to aspire to apply.

I am excited to be the Master of Trinity because of our scholarship across the broad spectrum of science and the humanities. We will continue to do research that has a profound impact across the world, whose most recent crown has been awarded to my friend and predecessor Master, Sir Gregory Winter. I am really looking forward to life in the Master's Lodge and the music, hearing about the teaching and the outstanding research and, of course the people. Trinity is a special community which I am proud to be joining.



Laura Rupolo

The Master's installation procession on 8 October 2019.



# ALUMNI RELATIONS & DEVELOPMENT

ALUMNI RELATIONS AND ASSOCIATIONS

ANNUAL GATHERINGS

ALUMNI ACHIEVEMENTS





## Alumni Relations & Development



### Dr Michael Banner, Chair of Alumni Relations & Development

It has been another busy and positive year for the Alumni Relations and Development Office. Our events programme is flourishing, our Alumni Associations and groups around the world continue to grow, and 14.5% of you gave to the College. We are extremely grateful for your continued support and generosity.

TrinTalk on the theme of ‘Aspects of Global Security’ provided a thought-provoking start to the year, and in November over 150 alumni enjoyed a private view of the Royal Academy of Art’s ‘Oceania’ exhibition with its curator, Nick Thomas (e2006), which marked 250 years since Cook’s first voyage to the Pacific. Particular highlights of early 2019 were two special anniversary celebrations – the Trinity Mathematical Society’s Centenary Dinner on 23 February, and the College celebration in April of 40 years since women undergraduates arrived at Trinity. In July we welcomed back over 450 alumni to Annual Gatherings for those who matriculated in 1987–1989 and 1962–1964 – both very happy occasions.

Our alumni associations and groups are thriving, thanks to the energy and enthusiasm of our alumni volunteers. Following the recent resuscitation of the Trinity Medics’ Association, we welcomed medics to the ‘relaunch’ dinner on 30 March, which included a fascinating set of pre-dinner talks by Professor Brendan Moriarty (1972), Mrs Scarlett McNally (1987), Dr Rachel Rummery (1991), and Dr Katherine Smith-Wiles (2009). The Trinity Law Association, Trinity Engineers’ Association, Trinity Choir Association and Trinity Women’s Network all arranged member events during the year, and the Trinity Business

and City Association's Distinguished Speaker Series continues to attract good audiences. The Trinity Business and City Association also held a special dinner in the six-hundred year old crypt of St Ethelreda's Church in February, in celebration of the Master's award of the Nobel Prize in Chemistry.

The Trinity Business and City Association, Trinity Medics' Association and Trinity Women's Network collaborated on a Distinguished Speaker event with Professor Dame Sally Davies on 26 June. The Master-Elect discussed the challenges of her role as Chief Medical Officer and took questions from a lively audience.

Our Alumni Associations rely on the energies and goodwill of those who volunteer time and expertise to make them a success. Please do get in touch if you are interested in joining an alumni group or establishing a new one.

During the year, my colleagues and I have greatly enjoyed meeting so many alumni outside the UK too, whether in Paris, Boston, California, New York, Washington, Shanghai, Beijing, Hong Kong or Tokyo to name just some of the venues for various gatherings great and small. Wherever the Master, Fellows and Alumni Office staff travel, alumni offer a very warm welcome, and the College is immensely grateful to those who help to organise and host overseas events.

This year more of you chose to make a donation to the College than ever before, and overall we raised more than £6.8million. Your donations are funding new studentships and bursaries, supporting our widening participation work, and the Wren Library, the Boat Club and the Choir. More details will follow in our Alumni and Development Office *Annual Report* in 2020, but for now on behalf of the whole College (Fellows, students and staff), I extend our warm thanks for your generosity and support.

If, as I hope, we see you at an event in Cambridge or elsewhere during the coming year, you may meet some new members of the Alumni Relations and Development Office team. Phil Pass has joined us from The University of St Andrews as our new Alumni Relations Manager, replacing Declan Hamilton, who has taken on a new responsibility as a Development Officer. Guido Ruijl is our other new Development Officer, and Rachel Sweet joins the office as Alumni Events Assistant.

With our new Master at the helm, we look forward to 2020 and to strengthening our global alumni network. Wherever you are based, we hope you will stay

connected with the College, and join us at alumni events. If you have any ideas or suggestions for how we can do better, we would be very pleased to hear from you – do get in touch with me, with Amy Trotter our Executive Director, or with any other members of the team.



Ian Olsson

## Alumni Associations



### Trinity First and Third Association Tony Pooley (1964), President

The First and Third Association is open to all alumni who enjoyed rowing whilst up at Trinity and who wish to maintain contact with past, and also present, members of the First and Third Trinity Boat Club. The Association exists to support the Club both financially and practically. Socially, the Association holds a black tie Biennial Dinner in College (most recently held on 8 September 2018) usually attended by about 150 alumni, a gathering in London on the first Tuesday of each month for drinks and supper at 'Ye Olde Cheshire Cheese' in Fleet Street, and an annual drinks event on the Saturday of Henley Royal Regatta (usually the first week in July every year).

A now well-established Steering Committee of alumni and current Boat Club Captains seeks to further the progress of both the Boat Club and the Association by agreeing development strategies, the degree to which the Association can assist in funding the Boat Club, and generally strengthening the bonds between current Club members and alumni. Please do get in touch if you want to be involved with this, or to offer support.

I succeeded David Jones (1958) as President of the Association in September 2018. About 50 members and partners attended the Association's drinks event on the Henley Royal Regatta Saturday this year. This is an event that has been hosted for many years by past captains Dan Darley (1994) and Rich Dewire (1996) as co-Presidents of the Association.

The Association's next Biennial Dinner will take place in College in 2020.

You can contact the Association via the website at [www.firstandthirdassoc.org](http://www.firstandthirdassoc.org) or email [assoc@firstandthird.org](mailto:assoc@firstandthird.org).



## Trinity Business and City Association Ihab Makar (1979), Chair

TBCA has had a good year, with a strong stream of events; its flagship Distinguished Speaker Series has now become something of an institution, attracting very senior guests in conversation. Feedback has been exceptionally positive, and despite the large number of events, many were sold out. The Series serves the dual purpose of intellectual stimulation and providing a platform for networking during the post-event drinks receptions.

The Association also made good progress on other fronts, with social events, including a black-tie dinner and informal drinks, and mentoring.

The theme for the first three events of the Distinguished Speaker Series this year were tech start-ups that had grown quickly, to great success, but were now having to undergo profound transformation.

The first transformation was born of necessity not choice, a high stakes turnaround. Laurel Powers-Freeling, Chair of Uber UK described the radical transformation Uber embarked on after being stripped of its licence to operate in London (which led to regaining its licence). Laurel was interviewed by Sir Gregory Winter.

The second transformation was very different. Tim Steiner, Co-Founder and CEO of Ocado had steered it to be the largest online supermarket in the world. Tim explained how they 'pivoted' the company in a new direction, by developing best in class software and AI, which allowed it to partner with supermarkets worldwide. Ocado's value rose spectacularly, becoming the best performing share of the year in the FTSE250.

The third transformation was by eBay, explained by its UK Head, Rob Hattrell. Having pioneered online selling from individuals on an auction basis, eBay was now transforming to becoming a platform for a universe of start-ups and young companies to have a route to market.

An interesting contrast to eBay was provided by David Lloyd, UK Head of Alibaba, the giant multifunctional retail platform from China. A key insight from this discussion was the degree to which China is at the very forefront of technology and AI, and that the use of technology has spread deeply into many levels of Chinese society.

In February, TBCA hosted a special dinner to celebrate the award of a Nobel Prize to Sir Gregory Winter. By universal consent, the highlight of the evening was Sir Gregory's extremely engaging speech. He began by explaining the science behind his inventions and, with wit and humour, the encounters with officials along the way, including what it was like receiving the phone call from Stockholm. His speech was exceptionally well received, and set the tone for the evening – one of celebration, pride and warmth in equal measure. The dinner was held in the atmospheric setting of the six-hundred year old crypt of St Ethelreda's Church in the City, adding to what was a memorable evening.

Our next event was an examination of the soul of the entrepreneur, an extremely insightful discussion with David McCourt, who built his cable construction business from scratch into a multibillion dollar enterprise.

In our last meeting, our guest was the Master-Elect, Professor Dame Sally Davies, Chief Medical Officer and Chief Medical Advisor to the government. Dame Sally described her substantial achievement of the rationalisation of the previously fragmented and opaque way research and development was undertaken in the NHS, by her creation of the National Institute for Health Research. She also described managing the challenges of being Chief Medical Officer, formulating guidance to the public. The Q&A that followed was especially lively, with alumni quizzing her on many aspects of her work, including her work at the forefront of the war against antimicrobial resistance.

The meeting with Dame Sally was a high note on which to end our programme of events for the season. The meeting was held as a collaboration between TBCA, Trinity Medics' Association and Trinity Women's Network, and we expect to be collaborating in the future with these and other alumni associations.

Having special events with both the outgoing Master and incoming Master made this season particularly memorable.

We have also been assessing the effectiveness of the Distinguished Speaker Series, using conventional metrics including the quality of speakers, attendance levels, and alumni feedback. Whilst the Series would score highly on these metrics, for the committee the true litmus test of success of these meetings is the 'buzz' of the lively conversations afterwards in the drinks receptions. This meets our dual mission of creating both thought-provoking events and bringing alumni together.

Going forward, the Association will build on the success of the Distinguished Speaker Series to branch out with new initiatives. These will include facilitating networking and mentoring, holding imaginative social events, and covering the world of start-ups and the Cambridge Cluster.



### **The Trinity College Choir Association Douglas Paine (2000), Chair**

The Trinity College Choir Association is open to all former members of the College Choir and organ scholars, although it holds and supports events that may be of interest to alumni outside these groups who appreciate the College Choir or choral music more generally.

On 3 December 2018, the Trinity College Alumni Carol Service was held at Temple Church in London. As in previous years, the TCCA provided the Choir, organised by Tom Dupernex (2000) and directed by Mike Waldron (2006). The Alumni Carol Service goes from strength to strength and we are looking forward to this year's service, which will be held on 2 December 2019, again at Temple Church. It will be the tenth anniversary of the service being established.

The TCCA also provided a Choir (of past members of the College Choir) to sing at the Annual Gathering (1987 – 1989) in College on 13 July 2019. The organist at Evensong was Richard Pearce (1987) and the Choir was directed by James Morgan (1988). If any former Choir members would like to sing at future Annual Gatherings, please contact the Music Administrator, Eleanor Lancelot via email [music.administrator@trin.cam.ac.uk](mailto:music.administrator@trin.cam.ac.uk).

On 5 February 2019, the TCCA held a drinks event at Pennethorne's at Somerset House in London, which was attended by over 40 TCCA members. Any members with suggestions for future events are encouraged to contact the Committee.

With the help of the Music Administrator, the TCCA issues a regular newsletter to TCCA members, which is also available on the College website ([www.trin.cam.ac.uk/chapel/tcca/tcca-newsletters/](http://www.trin.cam.ac.uk/chapel/tcca/tcca-newsletters/)). The most recent issue was in October 2019.

Any former members of the Choir who do not receive communications from the TCCA, but who wish to do so, should contact the Alumni Office at [alumni@trin.cam.ac.uk](mailto:alumni@trin.cam.ac.uk).



## Trinity Engineers' Association Amanda Talhat (2006) & Christie Marrian (1970)

The Trinity Engineers' Association has had another successful year fostering links between alumni, students and Fellows. A focus of all our meetings continues to be the informal mentoring session where alumni and students discuss engineering as a career and the choices that an engineer faces as that career evolves.

Our biannual, Cambridge-based, meetings kicked off at the beginning of Michaelmas Term on 18 October. Following on from recent meetings highlighting entrepreneurial opportunities for engineering careers, we switched gears and went 'large' with a panel session entitled 'Thinking Big in Engineering'. Automotive, environmental and civil are branches of engineering which change the world through engineering technology operating on a grand scale. A panel of speakers from across these sectors compared and contrasted from personal experience how people, teams, science, technology, engineering and internationalism combine to shape our future. Going 'big' were: John Miles, Professor of Transitional Energy Strategies whose interests include the technology and economics of future transport systems; Edward Fray a Senior Project Manager at the international construction consultancy Turner & Townsend; Talia da Silva (2013), who completed her PhD at Trinity in 2017 and is now investigating the behaviour of wind turbine foundations; and Richard Stephens, an aerodynamicist at Renault Sport Racing Formula 1 team.

For our second meeting we were lucky enough to piggyback on the Trinity College Science Society for 'An Evening with Sir Gregory Winter' on 24 January where the retiring Master talked about his Nobel-prize winning research on phage display – a technology which revolutionised the medicine market and enabled novel treatment of different cancers and autoimmune disorders. Many thanks to the TCSS for letting us join in a truly memorable evening.

Our 2019 programme began on Thursday, 17 October at Trinity for a joint meeting with the Trinity Women's Network, featuring a panel of eminent women engineers discussing their careers and career choices.

TEA Chair for the past few years, John Yeomans (1975) has finally found someone brave enough to take over. So in celebration of the 41st anniversary of women

being admitted to Trinity and the election of the first female Master of Trinity, we welcome Amanda Talhat (2006) as TEA's new Chair and offer our profuse thanks to John for his tireless stewardship of the TEA. Since Amanda is currently based in Switzerland, Christie Marrian (1970) will help co-pilot in Cambridge so that we can continue to deliver excellent events for our students and alumni.

We are always interested in welcoming new alumni to our events. If you are interested in getting involved, please get in touch. We have an active group on Facebook [www.facebook.com/TrinityEngineersAssociation/](http://www.facebook.com/TrinityEngineersAssociation/) as well as LinkedIn [www.linkedin.com/groups/4677270/](http://www.linkedin.com/groups/4677270/)



### **Trinity Golf Society** **Peter Larkin (1964), Chair**

The Trinity Golf day is held each year in June. This year's meeting was held on 20 June at Huntercombe Golf Club near Henley-on-Thames where 19 members spent an enjoyable day, both on and off the golf course. Lunch was followed by an 18-hole Stableford competition, tea and prize giving. The winner of the Bradbrook Cup was Paul Danielsen (1983), with a very impressive score on a challenging course. Prizes for the Nearest the Pin and Longest Drive were awarded to Ian Macinnes (1964) and Malcolm Watters (1983).

Plans are already being made for the next Trinity Golf Day on 20 June 2020, which will provide a great opportunity to meet and play against fellow alumni, and will be held at Royal Worlington and Newmarket Golf Club, followed by dinner at Trinity.

The Society would be delighted to welcome new members – we are open to all alumni who play golf. Being a member of a golf club or holding a recognised current or past handicap is not a requirement so if you would like to join the Society or have any questions please do contact us via the Alumni Office at [alumni@trin.cam.ac.uk](mailto:alumni@trin.cam.ac.uk). Members are able to invite a limited number of guests to join our events.

We also enter a team of 6 for the annual Inter-College Cambridge Alumni Golf Competition, held at the Gog Magogs Golf Course in April. Anyone interested

in participating (maximum handicap 18) should contact the Alumni Office with details of their handicaps/club membership/experience.

We look forward to welcoming you in 2020.



### **Trinity Law Association Andrew Walker QC (1987), Chair**

My first report as the new chair of the Trinity Law Association (TLA) gives me the opportunity to thank and pay tribute to my predecessor, Hardeep Nahal (1987), who stepped down in December 2018 having served his maximum term without parole. Under his leadership, the TLA continued to thrive and to grow its activities, and he is already missed.

Our mentoring scheme remains at the heart of the Association, and provides an invaluable link between current students (and former students who did not read law or who are contemplating a career change) and established practitioners. Now in its twelfth year, it remains as popular as ever, with a steady stream of new connections being made and often friendships formed between mentors and mentees. Some 18 Trinity students were paired with mentors from our database this year, and we are always looking for new recruits as mentors. If you are interested in finding out more about what is involved, please contact Rachel Avery (1998), the scheme coordinator at [avery@devchambers.co.uk](mailto:avery@devchambers.co.uk).

I was delighted to take part in something a little different for our 2018 autumn event, joining Angela Rafferty QC (1989) (since elevated to sit at the Old Bailey) to reflect on our experiences together as Chair of the Criminal Bar Association (Angela) and Chair of the Bar (me) during a particularly difficult time for many in the legal profession (and for those who need us). Steered skilfully by the indefatigable Jo Miles (e1999), Reader in Family Law and Policy, our aim was to provide glimpses of life in the deep end for those who now lead our professions, faced with so many problems, not least the dire state of public funding of the legal system and legal advice, and threats to the rule of law in a polarised and impassioned political climate.

In March 2019, alumni and students gathered to enjoy our now regular biennial dinner in the College. After an ever-stimulating Brexit update in the afternoon from Senior Tutor, Professor Catherine Barnard (e1996), we made our own contribution to marking the 40th anniversary of the admission of women as undergraduates, with Fiona Clark (1978) reminiscing after dinner about her experiences as one of Trinity's first female law undergraduates. With the benefit of useful feedback, we are already planning the next dinner in 2021.

We have been able to attract some excellent new 'talent' to our committee this year, including from among recent graduates, and are already working on several promising new ideas. If you would like to get involved in any way at all, then please do get in touch with me at [awalker@maitlandchambers.com](mailto:awalker@maitlandchambers.com).



**Trinity Medics' Association  
Dr Tony Hulse (1967), Chair  
and Dr Emma Cox (2010),  
Communications Officer**

Trinity Medics' Association (TMA) is open to any College alumni who have studied Medicine at Trinity or elsewhere. The Association exists to support and foster relationships between current College medical students and alumni.

After a period of inactivity, the TMA was re-launched this year. The occasion was celebrated with talks and a dinner in College on Saturday 30th March. The event chaired by Dr Emma Cox (2010) saw Professor Brendan Moriarty (1972), Mrs Scarlett McNally (1987), Dr Rachel Rummery (1991) and Dr Katherine Smith-Wiles (2009) share their career journeys and experiences since leaving Trinity. Their various talks illustrated the extraordinary diversity that can result from the choice of a medical career. The event was a resounding success and was attended by 75 alumni, 29 guests and 20 current students. There was a complete attendance of the 1996 year group and also included 7 of the Moriarty family!

In June the Trinity Medics' Association, Trinity Women's Network and Trinity College Business and City Association hosted a joint event at Gresham College in



Trinity Medics enjoying pre-dinner drinks in the Old Combination Room on 30 March 2019.

London as part of the TBCA 'Distinguished Speaker Series'. We were honoured with the presence of Master-Elect Professor Dame Sally Davies. Dame Sally shared fascinating insights about her role as Chief Medical Officer. The format was 30 minutes of diverse questions from the three chairs of the alumni groups followed by questions from the floor. Topics ranged from the global threat of anti-microbial resistance to Dame Sally's interest in collecting art.

The TMA is in the process of planning other events including a careers event in Michaelmas and a College dinner and talk in Lent Term on 28 March 2020. More details will follow in due course. We would like to thank the Committee for their enthusiastic support. We look forward to meeting old and new members at upcoming events.

Professor Anthony Quinn (1988)



## Trinity Women's Network Dr Kimberly Schumacher (1989), Chair

The Trinity Women's Network expanded their intellectual, social and networking remit to include collaborative events with other Alumni Associations.

In March, our yearly International Women's Day made the most of the 40th Anniversary of Women at Trinity celebrations. We enjoyed having two highly successful women from the first cohort of undergraduates, Professor Joan Lasenby (1978) now in the Electrical Engineering Division at Cambridge and Trinity Fellow, and Ms Amanda North (1978), who transitioned from roles in Silicon Valley to focus on the climate impacts on business, and sustainability. Oracle and their enthusiastic women's group warmly hosted this event. Joan and Amanda presented a fascinating slideshow recounting the unexpected directions their lives have taken to date. Several of their classmates attended the event and concurred that they did not feel like trailblazers at the time. Rather, they greatly enjoyed their time at Trinity, including rowing for the College after Amanda instigated the very first women's boat.



The TBCA, TMA and TWN welcomed Professor Dame Sally Davies at Gresham College in June 2019. She spoke about her role as Chief Medical Officer.

Trinity Business and City Association's chair, Ihab Makar, conceived the first tripartite event, who we joined along with the Trinity Medics' Association. At historic Gresham College, the panel and audience participated in a discussion with Dame Sally Davies about her achievements as Chief Medical Officer, prior to becoming Master at Trinity.

In September, at a rooftop venue on the Southbank, the TWN hosted another informal after-work networking event for all to meet old and new friends. The TWN's inaugural family event was held at Holland Park on an October morning. We visited the Wildlife Area to see wild birds in the hand and to learn about the national bird ringing programme, which was fascinating.

October also featured the TWN's participation in another collaborative Association event with the Trinity Engineers' Association. The TWN contributed to the mentoring of students with a Women in Engineering focus.

All alumni are welcome to join the TWN so if you would like to become involved please email [alumni@trin.cam.ac.uk](mailto:alumni@trin.cam.ac.uk). Join our Facebook page: [/www.facebook.com/groups/TrinityWomensNetwork](https://www.facebook.com/groups/TrinityWomensNetwork)



### **Trinity in China** **Alan Babington-Smith (1965) and** **Yang Xia (2003), Co-Founders**

Trinity has almost 100 alumni recorded in China, and the newly formed Trinity in China group is keen to attract more of you to join. The aim of the group is to promote guanxi, and Trinity, through increased communication amongst alumni, and events and meetings covering topics of professional or general interest. We are working closely with Trinity Alumni Relations and Development Office.

Alumni who are interested in joining the group are invited to contact the two organisers of Trinity in China as follows:

Yang Xia – Email: [biochemistrier@hotmail.com](mailto:biochemistrier@hotmail.com), WEIXIN: CB21TQ

Alan Babington-Smith – EMAIL: [alanbs100@outlook.com](mailto:alanbs100@outlook.com), WEIXIN: alanbsbj

Trinity in China will in due course to set up a dedicated weixin group.

## 三一中国校友会

联合创始人：Alan Babington-Smith (1965)、夏杨 (2003)

三一学院的中国校友会有近百名在册校友，热情欢迎您的加入。我们与学院校友办公室密切协作，旨在通过加强校友间在专业与非专业领域的交流、会议和活动，增进感情，促进合作，提升三一学院的知名度和影响力。

请感兴趣的校友联系三一中国校友会负责人：

夏杨：邮箱 biochemistrier@hotmail.com，微信 CB21TQ

Alan Babington-Smith：邮箱 alanbs100@outlook.com，微信 alanbsbj

我们将把您拉入专属微信群，与更多校友互动。



**Trinity in Hong Kong**  
Clockwise from left,  
**Tzo Tze Ang (1997),**  
**Dominic Chan (1988),**  
**Jessie Zhang (2001) and**  
**Tong Zhao (2008), Co-Founders**

Trinity in Hong Kong was formed in October 2018 with the purpose of organising more regular gatherings in Hong Kong for Trinity alumni. If you would like to join the group please email the Alumni Office via [alumni@trin.cam.ac.uk](mailto:alumni@trin.cam.ac.uk) and sign up to our Facebook group: [www.facebook.com/groups/trinityinhongkong/](http://www.facebook.com/groups/trinityinhongkong/).



We have kicked off our inaugural year with a couple of casual drinks events in Central and a dinner (pictured). We were also very pleased to be able to welcome the Master in April to celebrate his incredible achievement of the Nobel Prize. In June, we listened to a series of talks by a group of Trinity PhD studentship recipients in the Natural Sciences and had the opportunity to sit



Trinity in Hong Kong Dinner, Buenos Aires Polo Club, 24 January 2019.

down to dinner with them. We are pleased that the events have been attended by a wide range of alumni, from recent graduates to the more established Hong Kong cohort. We even welcomed some alumni who travelled in from mainland China and Singapore.

Our aim is to connect alumni based in Hong Kong and to welcome any Trinity members who may be passing through. Please do contact us if you would be interested in joining our activities.



### **Trinity in Japan** **Dr Gerhard Fasol (1978), Co-Founder and Chair**

Trinity in Japan meetings are held about once a month in Tokyo, a city with more than 30 million people in the region and one of the world's largest, most populated, and most interesting areas. The 2020 Olympics in Tokyo will be a global occasion, and we will plan events that Trinity members attending the Tokyo Olympics can join.

We are open to all Trinity members, students, Fellows, alumni, past Fellows and Fellow Commoners. Please join us! Our meetings are listed on our website at <https://trinityjapan.org/news/>. You can also contact us via the alumni website at <https://www.trin.cam.ac.uk/alumni/associations/>.

Our events reflect Trinity members' creativity. John Williams (1980), film director, showed us his new movie 'The Trial', which is directly based on Franz Kafka's novel and shines light on some of Japan's social and political issues of the day.

The Revd Dr Michael Banner (e2006) shared an evening with us on 28 September 2018, bringing us news from Cambridge and Trinity, and discussed 'What is morality?' Michael joined us again on 1 October 2019 to talk about 'The



I spoke on Japan's corporate governance reforms at the joint event between Trinity in Japan, HEC Paris, and other French Grandes Écoles on 7 March 2019.



Trinity in Japan meeting Monday 16 September 2019 in Tokyo with 21 Cambridge University PhD students and researchers in nanotechnology.

rise (and fall?) of humanitarianism’. On 28 November 2019, His Honour Judge Witold Pawlak (1966), Circuit Judge for many years at Wood Green Crown Court, shared his ‘view from the bench’ with us.

We also meet with alumni of other universities. We had a joint meeting with alumni of the MIT Sloan Society of Japan. When the alumni organisation of École des hautes études commerciales de Paris (HEC Paris) invited me to give a talk on Japan’s corporate governance reforms, based on my work as Board Director of a Japanese stock market listed cybersecurity group, we turned this into a lively joint event with Trinity in Japan, HEC Paris and several other major French Grandes Écoles.

On 16 September 2019, I organized a nanotechnology research symposium with talks by 21 Cambridge nanotechnology PhD researchers and PhD students including Trinity members, and several leading Japanese companies with research and business in nanotechnology including NTT Labs, a cooperation I started back in 1984. The aim of the symposium was to discuss nanotechnology research results in Cambridge and in Japanese companies, and to explore

possibilities for cooperation. You can find the program, the titles of talks and photographs of the symposium on our website: <https://trinityjapan.org/2019/05/30/16-sept-2019/>.

I founded Trinity in Japan five years ago. I was a PhD student at Trinity 1978–1981, was elected to a Junior Research Fellowship in 1981, and then Teaching Fellow from 1986, as well as University Lecturer in Physics at the Cavendish Laboratory.

What brought me to Japan? I first came to Japan in 1984, as Trinity Research Fellow, to present my work at conferences in Kyoto and Karuizawa, and to build research cooperation with NTT Research and Development labs. I realized Japan's importance in technology, its relative isolation, and challenges, and decided to make Japan my second focus next to physics. In 1991 I moved to Tokyo, and for five years I was faculty at Tokyo University in Electrical Engineering, winning a Japanese elite 'Sakigake' (Pioneer) research award. In 1997 I became an entrepreneur, starting a venture company. For several years I was Board Director of a stock market listed cybersecurity group, and I am guest Professor at Kyushu University, where I am building a science park, and several other projects including building the Ludwig Boltzmann Forum as a leadership forum based on science and technology.

I invited Nobel Prize winners Takaaki Kajita, Shuji Nakamura and Chuck Casto, who led the 150 member team of US nuclear experts who assisted Japan's Prime Minister to mitigate the Fukushima Dai Ichi nuclear disaster, and many other leaders. Several Trinity in Japan members also attended the Ludwig Boltzmann Forum – you can visit the website for further details about the Forum: [www.boltzmann.com/forum/](http://www.boltzmann.com/forum/).

Trinity in Japan is open to all Trinity members. A considerable number of Trinity members live and work here in Japan and are regular participants. These include officers in Japan's ministry of finance and Japan's foreign ministry, lawyers, investment bankers, University Professors, students and recent graduates. We also welcome a large number of Trinity members visiting Japan on their work or holidays. Every Trinity member is welcome. Our meetings are announced on our website, where you can get in touch: <https://trinityjapan.org/news/>. Please send me an email if you would like to be included on our mailing list, to receive event announcements: [fasol@eurotechnology.com](mailto:fasol@eurotechnology.com)



### **Trinity in New York – coming soon!**

We are excited to announce that we will soon be launching the new alumni group Trinity in New York. If you wish to join the group, or if you have ideas for events and initiatives and are interested in joining the Committee to help shape the group's activities, we would be delighted to hear from you. Please get in touch with the Alumni Office to register your interest: [alumni@trin.cam.ac.uk](mailto:alumni@trin.cam.ac.uk).

## Dining Privileges

Members of the College who are Masters of Arts are welcome to dine at the High Table four times a year, and there is no charge for either dinner or wine. Please note that there are likely to be a few occasions each year on which MAs cannot be accommodated in this way, for example special dinners or other College entertainments.

We regret that for reasons of space, MAs exercising this privilege may not bring guests, except that once a year an MA may apply for permission to bring (and pay for) a guest. The MA privileges described above also apply to all members of the College who hold a Cambridge doctorate, whether or not they are MAs.

If you wish to dine, please give notice to the Catering Office, either in writing to The Catering Manager, Trinity College, Cambridge, CB2 1TQ, by email [catering@trin.cam.ac.uk](mailto:catering@trin.cam.ac.uk), or by telephone 01223 338547, between 9am and 4pm, Monday to Friday. Please also let us know if there are any Fellows whom you would particularly like to meet when you dine (although of course we cannot guarantee that they will be able to dine on the night when you come). Dinner is at 8pm during Full Term and at 7.30pm in vacation; sherry is available in the Fellows' Parlour half an hour beforehand.

*Please note that gowns should be worn only by those MAs who are resident in Cambridge.*

**While MAs are welcome to dine as a party, please note that the total number of MAs and guests dining on any one night is normally limited to six.**



Ian Olsson

## Annual Gatherings

Annual Gatherings were held in 2019 for matriculation years 1962–1964 and 1987–1989. The speakers were David Whitehouse QC (1964) and Alexandra Dent née Stanton (1989), respectively.

Future Gatherings are planned as follows. Reluctantly, we must ask members to pay for bed and breakfast if they stay overnight in College when attending a Gathering. For the Gatherings to be held in 2020 the charge will be £50.

<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>Saturday 11 July</b> 1996–1998	1965–67 1972–74	Up to 1961 1990–92*
<b>Wednesday 15 July</b> 1968–1971	1999–2001	
<b>Saturday 12 September</b> 2008–2010		

\* To be confirmed.



Ian Olsson

## Alumni Achievements 2018–2019

The date given as the date of matriculation is the date of first entering the College, either as an undergraduate or advanced student.

- 1997 **C E J Arnold** OBE for services to British foreign policy. Appointed Master, St Edmund's College, Cambridge, beginning 1 October 2019.
- 1960 **G J Barker-Benfield** *Phillis Wheatley Chooses Freedom: History, Poetry, and the Ideals of the American Revolution* 2018.
- 2013 **R V Berrens** Sir Henry Wellcome Fellowship 2019, Cambridge University Cancer Research UK Cambridge Institute.
- 2003 **M C Bevan** MBE for services to music 2019.
- 1969 **R Boggis-Rolfe** OBE for voluntary services to the Armed Forces Reserves 2019.
- 1973 **N H Bourne** Awarded LLD (Honoris Causa) University of Trinity St David 2018.
- 1973 **D A Bowen** Appointed Non-Executive Director Transport for Wales, and Chair of the Audit and Risk Committee, June 2019.
- 1962 **J W Bowker** *Religion Hurts: Why religions do harm as well as good* 2019.
- 1983 **L Bristow** Knighthood for services to British foreign policy 2019.
- 2000 **C Choudhury** *Days of My China Dragon* 2019.
- 1974 **L J Clarke** OBE for services to Synthetic Biology 2018.
- 1976 **N D Coleridge** *The Glossy Years: Magazines, Museums and Selective Memoirs* 2019.
- 1963 **J P P Curran** 2019 International Communication Fellows' Award for *Power Without Responsibility*, co-authored with Jean Seaton.
- 1977 **J Dove** CBE for services to music 2019.
- 1955 **R F Eddison** *Wisdom and Wordplay* 2017.
- 1984 **H S M Elliott** Appointed Her Majesty's Ambassador to Spain and Non-Resident Ambassador to Andorra, beginning August 2019.

- 1995 **I S Farooqi** American Diabetes Association 2019 Outstanding Scientific Achievement Award, May 2019. Elected to the European Molecular Biology Organisation (EMBO), June 2019.
- 1996 **P Garaud** Elected Fellow of the American Physical Society 2019.
- 1996 **J Gill** Appointed First Tier Tribunal Judge 2019.
- 1982 **E J Gowers** Elected Fellow of the British Academy 2019.
- 1983 **I S Hall** Appointed Chief Examiner, Royal College of Psychiatrists, 2019.
- 1962 **C N Hamilton** *The Mantle of Command* 2014, longlisted for the nonfiction category of the National Book Award 2014. *Commander in Chief*, 2016. *ABC of Modern Biography*, with Professor H. Renders, 2018. *War and Peace: FDR's Final Odyssey: D-Day to Yalta, 1943–1945*, 2019.
- 1993 **T C Harold** Appointed CEO, Crescendo Biologics, April 2019.
- 1971 **J T Harris** Appointed Chair of the Fundraising Regulator, beginning 1 January 2019.
- 1954 **J P Hess** BEM for services to local community 2019.
- 1984 **A T G Hill** *Ruskinland: How John Ruskin shapes our world* 2019.
- 1979 **J Hughes** Appointed Chair of Kidney Research UK 2018.
- 1962 **J M H Hunter** BEM for services to mental health and the community 2019.
- 2000 **J D T Jane** Winner of the DLR Environment, Energy and Health Challenge 2019 for the Copernicus Masters.
- 1994 **L J Jardine-Wright** Awarded Lawrence Bragg Medal and Prize, Institute of Physics 2019, (with Professor Mark Warner, Cambridge).
- 2006 **T V Johnson** Tuggle Community Excellence Award, Johns Hopkins Bloomberg School of Public Health, 2019.
- 1994 **A J Kabir** Humboldt Award 2019, Alexander von Humboldt Foundation.
- 2006 **E F Keane** MERAC Prize 2019, European Astronomical Society.
- 1960 **W J G Keegan** *Nine Crises: Fifty Years of Covering the British Economy from Devaluation to Brexit* 2019.

- 1993 **K A A Kwarteng** Appointed Minister of State, Department of Business, Energy and Industrial Strategy, July 2019.
- 1994 **A Lamacraft** Professor of Theoretical Physics, University of Cambridge 2019.
- 1968 **M A Lane** Installed as 31st Master of The Worshipful Company of Water Conservators 2019.
- 1964 **J S Lodge** Elected Leader of Uttlesford District Council 2019.
- 1982 **J D A MacGinnis** Felicia A. Holton Book Award 2019 of the Archaeological Institute of America, for *Ziyaret Tepe: Exploring the Anatolian Frontier of the Assyrian Empire*, 2018, co-authored.
- 1984 **K R Mansfield** *The Future in Minutes* 2019.
- 1954 **D J D Miller** *The Novels of Justinian: A complete annotated English translation*, co-authored with Professor P. Sarris, 2018.
- 2001 **M B Mohan** Co-recipient of the EMBO Gold Medal 2019. UK Blavatnik Life Sciences Laureate for Biological Sciences 2018.
- 1987 **A A Montagu** *The Riddle of the Sphinx: A novel* 2019.
- 1976 **A W J Morgan** Companion of the Order of St Michael and St George 2019. Appointed Coordinator of the UN Panel of Experts on DPRK Sanctions, beginning April 2019.
- 1996 **E C Murray** *Pink House Living: For people cheating on fashion with furniture* 2019.
- 2014 **L Pajovic** Solo exhibition 'In the Image of La Serenissima: Reflections on the architectural history of Perast (1687–1979)', Montenegro 2019.
- 2001 **G B Paquette** *The European Seaborne Empires – From the Thirty Years' War to the Age of Revolutions* 2019.
- 2001 **S H Parcak** *Archaeology from Space: How the Future Shapes our Past* 2019.
- 1967 **S C Paul** Editorial Board, Hunterian Society, London. Senior Demonstrator in Anatomy, Department of Physiology, Development and Neuroscience, University of Cambridge. Chairman, Leonard Woolf Society, UK.

- 1973 **U P Phadke** *The Scale-up Manual: Handbook for Innovators, Entrepreneurs, Teams and Firms*:1 2018.
- 1968 **M R E Proctor** Appointed Chair of the Cambridge Trust, 2018 (Cambridge Commonwealth, European & International Trust).
- 1964 **F M M Pryor** *The Fens: Discovering England's Ancient Depths* 2019. Radio 4 Book of the Week, 8–11 July 2019.
- 1994 **A Ray** QC 2019.
- 1985 **D W Runciman** *Where Power Stops: The Making and Unmaking of Presidents and Prime Ministers* 2019.
- 1994 **I I Sesay** *Beneath the Tamarind Tree: A Story of Courage, Family, and the Lost Schoolgirls of Boko Haram* 2019.
- 1995 **R A Sexton** Elected Councillor, Solihull, Shirley West, May 2019.
- 1973 **R Sharpe** Elected Honorary Member of the Royal Irish Academy, 2018.
- 1994 **E F Shuckburgh** Reader in Environmental Data Science, Cambridge University Department of Computer Science and Technology, May 2019.
- 1987 **B G Smithies** Starred in the arthouse movie 'Here for Life', directed by Andrea Luca Zimmerman and Adrian Jackson, 2019.
- 1964 **M A Stanton** Inducted into the Internet Society's Internet Hall of Fame, September 2019.
- 1980 **S H Strogatz** *Infinite Powers: How Calculus Reveals the Secrets of the Universe* 2019.
- 1970 **H Trenchard** Appointed Senior Adviser to Her Majesty's Government on Japanese Financial Services, September 2018.
- 1985 **J W D Upton** QC 2019.
- 1997 **V E L Wakefield** QC 2019.
- 1988 **A Weller** Appointed to the Board of the Centre for Data Ethics and Innovation 2018.
- 1996 **S J Whitehouse** Fellow Member of the Institution of Engineering Technology 2019.

- 2008 **T Westover** Doctor of Humane Letters, Northeastern University, May 2019.
- 1992 **B D Wilson** *The Way We Eat Now* 2019. Investigative Food Writing Award, Guild of Food Writers 2019.
- 1995 **T M Wolff** Appointed Director of Leipzig Opera, beginning 2022/2023.
- 1992 **X Yu** 2019 Hsiang-tung Chang Young Neuroscientist Award.



Ian Olsson

## Donations to the College Library

In the period from 25 September 2018 to 23 September 2019, the following members of the College gave the Library the books named, which they have written or edited or translated:

**T Allen.** *The forgotten banker: the remarkable life of Frank Cyril Tiarks, 1874–1952.*

**A Bevilacqua.** *The Republic of Arabic letters: Islam and the European Enlightenment.*

**J Butterfield.** *Non-locality and modality*; edited by Tomasz Placek and Jeremy Butterfield.

**J Butterfield.** *Reality and measurement in algebraic quantum theory*; edited by Jeremy Butterfield [and five others]

**P Casement.** *Learning along the way: further reflections on psychoanalysis and psychotherapy.*

**N Denyer.** *The apology of Socrates; Plato. The apology of Socrates; Xenophon*; edited by Nicholas Denyer.

**P Elliott.** *Constance: one road to take. The life and photography of Constance Stuart Larrabee (1914–2000).*

**T Faber.** *Close to the edge.*

**T Faber.** *Faber & Faber: the untold story.*

**N Fennell.** *Mount Athos and Russia 1016–2016*; edited by Nicholas Fennell and Graham Speake.

**J Gordon.** *Edward Wakefield 1862–1941: aviator, soldier, philanthropist.*

**P Hardie.** *Classicism and Christianity in Late Antique Latin poetry.*

**H-W Henn.** *Homotopy theoretic methods in group cohomology*; William G. Dwyer, Hans-Werner Henn.

**E Holberton.** *The Oxford handbook of Andrew Marvell*; edited by Martin Dzelzainis and Edward Holberton.

**L B T Houghton.** *Virgil and renaissance culture*; edited by L.B.T. Houghton and Marco Sgarbi.

**L B T Houghton.** *Virgil's fourth eclogue in the Italian Renaissance.*

**D M Jackson.** *An introduction to quantum and Vassiliev knot invariants;*  
David M. Jackson, Iain Moffatt.

**S D Keynes.** *English legal history and its sources: essays in honour of Sir John Baker.* (Includes an essay by Professor S.D. Keynes: *The engraved facsimile by John Pine (1733) of the 'Canterbury' Magna Carta (1215)*).

**J Khalfa.** *Fast(e);* Jean Khalfa and others.

**D Linfoot.** *The World War 1 diaries of Arthur Linfoot, 1914–1918 R.A.M.C. 1915–1919;* transcribed and edited by Denis Linfoot.

**J Massey Stewart.** *Thomas, Lucy & Alatau: the Atkinsons' adventures in Siberia and the Kazakh Steppe.*

**M McMullen.** *Family offices: the STEP handbook for advisers.* 2nd edition. (Includes an article – *What is a family office?* By Mark McMullen and Ian Macdonald).

**D Miller.** *Korea's Olympic icon: Kim Un-yong's resolute odyssey.*

**D J D Miller.** *The novels of Justinian: a complete annotated English translation;*  
David J.D. Miller, Peter Sarris.

**H K Moffatt.** *Self-exciting fluid dynamics;* Keith Moffatt, Emmanuel Dormy.

**A Nash.** *Essays critical and historical.* Volume 1; by John Henry Newman; with an introduction, notes and textual appendix by Andrew Nash.

**D Nayyar.** *The innovation republic: governance innovations in India under Narendra Modi;* Vinay Sahasrabuddhe, Dhiraj Nayyar.

**D Nayyar.** *Modi and markets: arguments for transformation.*

**N Postgate.** *Documents from the Nabu Temple and from private houses on the citadel;* J.N. Postgate, S. Herbordt, R. Mattila, B. Parker, D.J. Wiseman.

**M Rees.** *Our cosmic habitat.*

**M Rees.** *On the future: prospects for humanity.*

**M Rees.** *From here to infinity: a vision for the future of science.*

**M Rees.** *Gravity's fatal attraction: black holes in the Universe.*

**P Sarris.** *The novels of Justinian: a complete annotated English translation;* David J.D. Miller, Peter Sarris.

**D Seed.** *US narratives of nuclear terrorism since 9/11: worst-case scenarios.*

**G Speake.** *Mount Athos and Russia 1016–2016;* edited by Nicholas Fennell and Graham Speake.

**R Tetlow.** *Perceptions of Christianity from people of other faiths.*

**N Thomas.** *Oceania;* edited by Peter Brunt and Nicholas Thomas.

**J Tusa.** *The Nuremberg trial; Ann Tusa and John Tusa.*

**A Vine.** *Miscellaneous order: manuscript culture and the early modern organization of knowledge.*



Graham Copekoga





## COLLEGE ACTIVITIES

FIRST & THIRD TRINITY BOAT CLUB

FIELD CLUBS

STUDENTS' UNION AND SOCIETIES

COLLEGE CHOIR





## College Activities

### Trinity College First & Third Boat Club

*Megan Crane (2016)*

First and Third has had a wonderful year. In addition to a successful refurbishment of the Boathouse, we have welcomed Steve ‘Bomber’ Harris as Head Coach and Boatman. Bomber’s expertise and knowledge have had a positive impact on the Club overall and our results are beginning to reflect such effective coaching.

Michaelmas Term began with our Lower Boat Captains working very hard and managing to teach over one hundred students to row! As usual, First and Third



The First and Third Club after Easter Term Dinner.



The Winning NW1 Crew.

novices had a successful term, performing well in races such as Emma Sprints and Clare Novices. It was heartening to see the strength and depth of our Novice squad as our NM2 finished only 12 seconds behind our NM1 in the Novice Fairbairn Cup, coming 13th and 7th respectively. NW1 finished Michaelmas Term as the fastest novice women's crew on the river, winning the Novice Fairbairn Cup by over nine seconds. Michaelmas Term for the Senior Squad saw a focus on fitness and learning to row 'Bomber' style ready for future Bumps campaigns!

The Club enjoyed a successful Training Camp in Newcastle in January (and the weather was not as dreadful as it could have been!). As always, the Camp was an effective way of integrating our Novice and Senior squads. A lot of fun was had on and off the water, with highlights including matched VIII racing, escape rooms, and lots of games of 'Mafia'.

Much progress was made in Lent Term, with whole-Club circuits encouraging greater integration of the Club as a whole. We raced both on and off the Cam, sending three boats to Bedford Head in February, and putting out five boats in the Lent Bumps. Our top men's and women's boats both went up in the Bumps – a clear testament to Bomber's effective coaching. Unfortunately, due to poor weather, we were forced to cancel the annual STCS and Talbott Cup. This was a particular disappointment given the new Grenfell-Shaw Memorial Trophy for the fastest women's lower boat. We hope to be able to present this for the first time next year.



Summer BBQ on Jesus Green.

As usual, Easter Term saw a focus on success in the May Bumps. The women's side in particular performed very well, with W2 going up two (and getting very close to two over-bumps!) and W1 going up one. A special mention must go to our M2, who heroically rowed over every day, despite Clare M2 getting continuous whistles on them every day!

First and Third is more than just a rowing club. Throughout the year we have enjoyed many social events, including Boat Club Dinners, the annual firework display, and summer barbecues. I feel privileged to have been part of such a fun and successful Club for the past three years. The members of First and Third are such friendly and inspiring people; I wish them and the Club as a whole all the best over the coming years!

## Field Clubs

### Trinity College Badminton Club

*Richie Yeung (2016)*

Trinity Badminton Club had a fantastic year, winning the open league and mixed Cuppers in Lent term. After a successful preseason training camp in Hong Kong, the Men's 1sts (captained by Sahil Mali) achieved an unbeaten season in the college league, finishing 1st in Division 1 by defeating Jesus 5–4 in a nail biting decider. Under the leadership of Women's Captain Charlene Tang, the Women's 1st team finished a commendable 2nd in the first division. The lower teams have had a successful year as well, with the Men's 2nd team (captained by Jimmy Liu) promoted to division 3 and pulling off a 3–0 upset against the seeded Magdalene team in open Cuppers, and the Men's 3rds (captained by Alexander Chamberlain), narrowly missing promotion.



Lafayette Photography

Trinity also had a successful Cuppers campaign. Trinity strength in mixed Cuppers is evident from reaching the finals for the 4th consecutive year, and winning for the first time since 2012. Unfortunately, we were unable to translate this victory to open Cuppers, where we came 2nd (again!) against strong competition.

All teams have benefited from the professional coaching, sponsored by the Field Club. Fresher Sylvia Ma and College veteran Sahil Mali were part of the Varsity team that defeated Oxford for the first time in 6 years. Field Club colours were awarded to Sahil Mali and Charlene Tang.

## Trinity College Basketball

*Alfred Wong (2016)*

Basketball at Trinity tends to follow a general ebb and flow throughout the academic year. It begins with an opportunistic start in Div 1, pitched against the likes of the Gurdon Institute and Lithuanian Society, teams formed by mature students with a lot of experience. Going into our first match, we knew very little of what to expect from our opponents, Sidney Sussex, but they came out in full force, hammering us for a 20-point win. This set the tone for a brutal Mich term: injuries, altercations, ejections and all. We struggled to stem the tide, suffering double digit defeats across the board ultimately resulting in relegation.

Without fail, Lent term in Div 2 is always much more manageable. With lower scoring volume and morale, all it takes is one good run to break a team and make a game. Sometimes this came in the form of one star player – both Marc Bonaventura and Heiki Niglas frequently stepped up to the plate. At other times everything just clicked and we overwhelmed our opponents with a flurry of Spurs-like passing and efficiency. This Lent term we pulled the team together – it's much easier to relax and play at your best when you're not scrambling around trying to avoid being dunked on!

Our annual mini-varsity match against Christ Church, Oxford, was the culmination of these successes. On paper they brought a strong team. Stefan Petrevski, their captain, was a constant long-range threat, going 4 for 8 from deep. Two Blues: Tommy Pullan possessed a commanding inside presence, scoring 21 out of their 47 points, and Giulia da Cruz shot 100% from 3. With a grand total of 0 Blues, we



really had our work cut out for us, but a last-minute layup by Heiki eked out the hard-fought win for Trinity.

We rounded off the year with a very typical Cuppers run. As 4th seed, we skipped the first round of play to beat the Hellenic Society 64–35 in the second. This brought us up against Darwin, a mature college powerhouse,

where we suffered a 25–57 defeat. There's some consolation in the fact that they then went on to win the tournament, but this again showed that Trinity needs a big kick to put us up into the elite echelons of Cambridge College Basketball – maybe next year?

Many thanks to Oliver Nick, for organising the fixtures, and best wishes to Noah Porcelli, our incoming captain.

## Trinity College Cricket Club

*Deagan Bartlett (2015)*

This time last year I finished my report with the bold prediction that we would escape the group stages of Cuppers this year, and this is exactly what we did!

I was not so confident of this when we arrived at St Catharine's for our first game with just 8 players. Fortunately a 97-run partnership between Alex Spencer and Oliver Dixon took us to a well above-par score of 162–5 and we won comfortably, by 60 runs. Our bowling was our strong point this year, as demonstrated in our second game against Christ's, where we restricted them to just 89–9 in their 20 overs, which we chased down with ease. After two convincing victories, we knew that a win against Trinity Hall would send us through to the quarter finals. Things didn't start off well. After we posted a disappointing score of 78–7 in our 20 overs, we all thought that it was going to be a very short game. However our bowling was exceptional again, and we managed to take it down to the final over. We lost with one ball to spare, but to be disappointed not to win after only posting 78 says a lot about our bowling!

Whilst we waited for the other Cuppers groups to finish, we played our annual friendly against Remnants, where we inflicted their tied (with the same fixture last year) 8th worst defeat in terms of number of balls to spare. Nick Grogan's 3-13 limited Remnants to 83-7, which we chased with 53 balls remaining, the speed of the chase thanks mainly to Alex Spencer's 41\* off just 18 balls. Both Nick and Alex went on to receive Field Club Colours. Within hours of this victory we heard that our high net run rate was sufficient for us to reach the quarter finals, where we would play Emmanuel.

Having won the toss, we took to the field and started well, with the score 21-2 off the first 5 overs (without any boundaries). Things began to slip away from us, as 5 overs later Emmanuel had added 58 to the score, and after 20 overs they finished on 160-8. Despite this being the largest score we would have to chase so far this year, the wicket was looking true, with decent carry and pace so we were confident. What was surprising, when Naresh Rasakulasuriar and Cameron Petrie went out to open the batting, was how little bounce the opening bowlers seemed to be generating. After our 6th wicket fell in the 14th over, the ball was thrown to the umpire, who quickly asked for a replacement. It was clear when the ball was thrown over the boundary why this was the case. The ball felt like a sponge in the hand, was misshapen and was falling apart. It's not a surprise that we couldn't get it off the square. Now using the ball we bowled with, almost immediately the run rate increased, leaving us feeling more than a little hard done by. In truth, we never got close and lost very comfortably. Emmanuel went on lose in the final, so there is no shame in being knocked out by them.



Cricket week this year was dominated by the rain. On the Sunday we played President's XI and, as is tradition, we fielded first and, as is now becoming a tradition, we drew the game despite bowling them out for 148. After Monday's game was a washout, and with rain forecast for the afternoon, we broke from tradition and played a T20 against the Racing Club (slightly different from the usual 3-session declaration match!). It was a low scoring game, which is unsurprising as I think we were one of the only games being played in Cambridge that day. We batted first and scored 111-7, which proved to be just enough, as we won by 6 runs.

Our final game of the season was against Trinity College High Table in a T20. Having lost the toss, we batted first. We got off to an excellent start, with a 51 run partnership between Naresh Rasakulasuriar (30) and Abhiram Gundimeda (39), taking us to 84-1 in the 11th over. 160+ looked likely, however no other batsman reached double figures. Wickets continued to tumble, but we managed to reach 129 all out, helped by 26 extras. In response, Gareth Jones (1-8) and Abhiram Gundimeda (2-2) made the most of the swinging new ball, taking early wickets and restricting the run rate. Siddharth Chandrappa continued to limit the scoring, conceding just 10 runs in his four overs. TCHTCC's first boundary came in the 9th over, at the end of which we had only conceded 25 runs. We were always in control of the game, demonstrated by the field off the final ball of the innings (selfishly bowled by myself) which was three slips, two gullies, leg slip, leg gully, silly mid-off and silly mid-on. We finished the season with a wicket off the final ball, although, despite the field, it was in fact LBW.

Considering a large proportion of our team is now graduating, that wicket brought an end to the Trinity team in its current form and my time as captain after three years. Alex Spencer and Naresh Rasakulasuriar will be taking over next year, and hopefully they can lead us to the semi-finals.

## **Trinity College Association Football Club**

*Matt Blair (2015)*

After winning the Division 2 title under the captaincy of Sam Webb and Ryan Whiteley last year, Trinity returned to the top division of college football for the 2018/19 season.

Trinity's first fixture back in the top flight would prove to be our most difficult, with a trip to eventual champions Fitzwilliam. A heart-breaking late goal (which was swiftly followed by another as we piled forward in chase of an equaliser) meant we started our campaign with a 2-0 defeat.

We bounced back the following week with a 3-2 win over Girton, thanks to goals from Dan Beech, Josh Hampson and Matt Blair. Strangely, these goals were the only two that Girton would score all season, giving Sam Webb (who bundled the ball into his own net for Girton's first goal) the unusual honour of finishing the season as both Trinity and Girton's top goal scorer.

The next game of the season was a very disappointing defeat away at Queens'. Having taken the lead courtesy of a long throw-in (a tactic used to great effect throughout the season), we conceded two late goals and ended up losing the game 2-1. However, despite being just our third game, this would be our final league defeat of the season.

After receiving a bye in the first round of Cuppers, our first game was in the round of 16 against Homerton. This was a very cagey affair, not helped by the fact that the fixture had to be played on the rugby pitch and further hindered by the torrential rain which began in the second half. The breakthrough came with less than 5 minutes to play thanks to a Sam Webb header from a corner, and the result was confirmed when Matt Blair scored with the final kick off the game, thanks to a blistering counter-attack made possible by the 'fresh' legs of super sub Cian Jordan.

Michaelmas Term was capped off with a resounding 8-3 victory over Jesus, which included a Sam Webb hat-trick and a brace from Fedor Misyura.

We started Lent Term in a similar fashion to Michaelmas, conceding two goals in the final stages of our first game. However, we were still able to hold onto a 3-3 draw against Robinson.

This was followed by our most exciting game of the season, a 4-3 victory over Sydney Sussex. Here, we took the lead on four separate occasions, which included an excellent brace from Will Honeyman.

An injury hampered quarter final against Gonville & Caius spelled a disappointing end to our Cuppers campaign. However we finished strongly in the league, with convincing victories over both Downing and Churchill. The latter of which confirmed our final league position of second place, with a points tally of 17.

A very successful season on the pitch was capped off with victory in the College varsity match against Christchurch, with Ewan Robertson proving vital in goal as Trinity won the game via a penalty shootout.

The season was also successful off the pitch, with social secretary Oliver Dixon and cultural mediator Matt Rothburn organising an excellent end of season football tour, with the highlight being a visit to Porto's Estádio do Dragão to watch Portugal take on the Netherlands in the final of the Nations League.

## Trinity College Women's Amateur Football Club

*Louise Marzano, Captain 2018 – 2019*

Trinity College Women's Amateur Football Club (TCW AFC) has had an excellent year. The team built on last year's expansion with recruitment during Freshers' Week, particularly at Chaplain's Squash, and attracted some excellent new players, including the incoming captain, Mara Lawrenson. The attraction of TCW AFC for many is that we welcome completely novice players and train together in a supportive environment to build skills and confidence. This environment meant that as well as recruiting new players, we retained all our players from last year,



Players from left to right: Samantha Hajna, Hannah Marshall, Olivia Horne, Wen Tong, Jessica Hyde, Lauren Sendles-White, Louise Marzano, Hannah Streat, Farzana Huysman, Flora Charatan, Katarina Cimeša, Abi Malins, Mara Lawrenson.

Absent from photo: Ruby Rogers, Lowri Foster-Davies, Anna Jezewska, Beth Clent, Lara Jenkin.

aside from those graduating. As a result, we had an exceptionally strong team and won all our league matches to become champions of League 2 and earn a promotion to the top Division for next year.

TCW AFC also made it to the semi-finals of the Plate where, unfortunately, we had a tough 3–1 loss in extra time to Christ's/Churchill/Lucy Cavendish. To top off TCW AFC's achievements this year, the sweetest victory was our 7–0 win against Christ Church in the annual sporting exchange – a result which clearly shows how much the team has progressed. Finally, our tour to Lisbon was a great success with a full team of 11 players in attendance and no matches lost! As always, the tour provided a great opportunity for the team to bond off the pitch and to give a fond farewell to some of our longest standing players.

These results are due to all the girls' outstanding commitment to training and matches alongside busy work schedules, and I would like to thank them all for their contributions to TCW AFC over their time at Trinity. It has been a pleasure to captain this year and I look forward to keeping up to date with TCW AFC's future successes. I would also like to thank Tim Chan and Harri Foster-Davies for their coaching contributions.

## Trinity College High Table Cricket Club 2019

*Cameron Petrie (2011)*

TCHTCC had an enjoyable but disappointing season losing all five of our matches, though some by very fine margins. The High Table team was comprised of the usual combination of College Fellows and a range of 'acquired' players, this year including Vibhu Tewary, Aftab Alam, and Ahmed and Kabir Khwaja.

The season began with the now traditional drubbing by the College undergraduates, who were only able to rack up 129/10 all out with the help of some friends, and Aftab's 4/10 off 4 overs being the bowling standout. Our response was dominated by Cameron Petrie's 51 off 55 balls, Richard Serjeantson's 8 off 16 balls, and the 11 extras which made up the majority of our 78/8. We fared better against NCI, who reached 103/7 off their 20 overs, with Kabir Khwaja (2/12 off 4 overs) and Glen Rangwala (2/17 off 4 overs) dominating our bowling performance. We responded well with the bat, but became mired in the final overs and couldn't rotate the strike sufficiently well to get us closer than 96/7. We came close again



against Clare Hall, who managed 137/2 against our seemingly toothless bowlers. Trinity alumni Graham Sills [2002] (30 off 30 balls) and Douglas Buisson [2011] (24 off 34 balls) put us into a good position, but we fell nine short at 128/8. Our solitary declaration game was against the old foe Jesus Long Vac.. Cameron Petrie (55 off 54 balls) and Gabriel Fox (32 off 67 balls) managed to make the pitch look relatively docile while quickly amassing a 92 run partnership in 18 overs, but following their dismissals we stumbled and were then truly flailing at 115/7 in the 27th over. It took us another eleven overs to creep to 150/8 off 38 overs when the declaration was made. We managed a good start to have Jesus 29/3 in the 12th over, but then didn't get another breakthrough until the 30th, by which time Jesus brought out their hitters and reached our total with several overs to spare. Our final match against Remnants CC was a mixed affair, as their openers built an imposing total before we demolished the rest of the top and middle order, with Nathan Wright (2/30 off 4 overs), Andy Owen (2/13 off 4 overs) and Vibhu Tewary (1/5 off his final over) combining with some excellent fielding to produce five wickets and two run outs (including one off the last ball of the innings) to halt Remnants at 127/7 off their 20 overs. Our response was robust, but Cameron Petrie (18 off 28 balls), Richard Serjeantson (8 off 20 balls), Doug Buisson (21 off 22 balls), and Vibhu Tewary (9\* off 6 balls) were only able to get us to a respectable but hardly threatening 93/7.

This wasn't our most successful season, and despite calls for some "easier opposition", it is worth remembering that we came very close to winning two of five, and were only really outclassed in the first and last of the games.

## Trinity Hockey

### Men's

*Christopher Bealey (2017)*

The Men's side have had a varied year filled with mixed success. Following the departure of several older players including the old captain last year, the 'Titz' were keen to build on previous success including reaching last year's coppers' semi-final, and we were very happy to have a large number of keen freshers join the ranks to supplement the squad from last year. It's fair to say the Men struggled in the first term to achieve the results that it was clear they were capable of. Although a very able team, we found it difficult to create chances and get the ball in the opponent's net in league matches, and unfortunately could not escape relegation from the top division.

The story was different in Cuppers. With a first round victory against a remarkably strong St Johns team (Division A winners), in which all players excelled, as we won 2-1 with a last minute Gareth Jones tap in, the Titz marked the first win of the term and a strong start to our Cuppers campaign. We proved ourselves



to be serious title contenders as we dispatched Emmanuel 8–1 in the quarter finals, and then comfortably pushed aside the previous winners St Catz 5–1 in the semi-finals with adept play from experienced Titz veterans. On 5th May was the final showdown as we faced Jesus in the final. We had played them before in an evenly matched league game which we ultimately lost, and we were keen to secure the title and get revenge. Unfortunately on the day, the Jesus team proved too strong for us as we fell to a couple of early goals which we were unable to recover from. In all, the success of our Cuppers campaign reflects the true potential of an enthusiastic young team which I am sure will see success next year in the league and Cuppers. I will be retaining captaincy next year (ably assisted by Joe Manley) and I am really looking forward to pushing the team to new heights.

## **Women's**

*Flora Charatan (2016)*

The loss of some veteran women's hockey players to years abroad and graduation put Trinity-Fitz in a difficult position each week in terms of player numbers. However, our somewhat nuclear team size meant that morale was never in short supply and strong team bonds could be made on and off the pitch. With the loss of some hockey players to the Blues (which disqualifies them from the college league), this year we have worked on developing our playing style as a team rather than relying on the individual skills of certain players. Despite a slow start in the Michaelmas league, Lent term saw the results pick up some sizeable wins over Murray Edwards-Emma-Christ's (5–0), Claire-Queens-Downing-Trinity Hall (4–0) and Girton-Homerton (5–0) to earn a 3rd place finish.

After reaching the finals of Cuppers 2 years in a row, it was disappointing to be knocked out in the quarter-finals against a strong Murray Edwards side who went on to win the tournament. That said, the results do not reflect the strong performances across the team: returning linguist Lauren Sendles-White added much to the defence line and incoming captain Grace Montague-Fuller produced some astounding saves on the goal line each week (often having played in the men's or mixed game beforehand). Catherine Xu, our resident PhD player, continues to make a solid contribution in the midfield and thanks to her lengthy degree we shall be welcoming her back for another year. Outgoing loyal TCWHC veterans Louise Marzano and Becky Sheperdson will be sorely missed, but we look forward to inviting fresh talent after a long summer break of fervent hockey practice and recruitment strategising. Watch this space!

## Mixed

Mixed hockey as ever offers a fun opportunity for the Men's and Women's team to combine in the hope of achieving Cuppers glory. Just like last year, the mixed team made it through to the final of Cuppers. We comfortably beat all opponents (Girton 5-0, Queens/Clare 5-2 and Selwyn 5-2) in the rounds leading up to the final, where we faced Jesus. In the most entertaining game of the day, Titz pushed Jesus right to the very end of the game, where disappointingly they managed to put away a last minute goal to secure the win. All players performed brilliantly, and it was great to see the way in which they combined on the pitch to evenly match an extremely skilled opposition all over the pitch.

## Trinity College Mixed Lacrosse

*Iris Pearson (2017)*

This has been a year of new recruits and undiscovered talent for the Trinity Mixed Lacrosse Team. The team saw a whole host of new faces (not just freshers!) and we played some valiant matches against a range of colleges, confirming our position



firmly in the middle of Division 2, with our shiny new goals adding some extra excitement to the game.

It has been a great pleasure to captain this team, who have always been keen to play, no matter what the weather (or the clashing Six Nations match), and never gave up in what often became very tiring games of lacrosse. Determination, team spirit, and a marked increase in the number of catches have been the key elements which spurred us onto victory or helped us have fun even in defeat this year. I am excited to see what will happen next year.

## **Trinity College Mixed Netball Team**

*Amelia Hutchinson (2017)*

2018–19 has been another successful year for mixed netball, taking the Cuppers crown once again. Although not as sunny as last year's tournament, Trinity still brought heat to the courts as the team breezed through the group stages. The latter stages saw some tougher games but Trinity emerged undisputed victors. A particular mention goes to Mixed Netball veteran, and all-time top scorer (as well as incumbent co-captain) Marc Bonaventura for his incredible shooting!

The team has performed well the entire season, not just in Cuppers, keeping an almost clean sheet, playing and looking professional in their newly designed kit. I'm excited for what the next year will hold for Trinity Mixed Netball, and am sure that new captains Marc Bonaventura and Sam Bealing will do a great job.

## **Trinity College Rugby Union Football Club**

*Hilary Foord (2016)*

After the highs of the 2017/18 season where TCRUFC gained a triple promotion, the 2018/19 season has been a challenging one for TCRUFC, with the Club often struggling to get a full team out. However, when they did some great rugby was played. There was an entreatingly 45–20 loss to Churchill in the sun where the ball was thrown around and the new Fresher triumvirate of Hughes, Clark and Rasakulasuriar showed their promise. It was also very pleasing for the whole team

to see Dickens back on the field after a two year battle with a nasty knee injury, and seeing him back to his barnstorming best. However, injuries were common for TCRUFC and this would plague the team throughout the season.

The next game the team played was against a desperate Robinson side, looking for their first win of the season. This desperation and another series of injuries for TCRUFC (down to 10 at one stage) led Robinson to victory – although it was not that convincing for them, only winning 29–19. TCRUFC showed that the players on the pitch had a lot of promise, but that the inability to get a full XV out was always going to hamper them.

Our final game of the season was the traditional grudge match against Christ Church. With some old stages coming out we had a full XV, but only XV. This meant that injuries again hampered TCRUFC and a lack of team cohesion (due to the lack of match practice showed) as we went down 19–0. Plenty of heart was shown, as usual, with some big hits going in, but the attack stuttered as combinations had not been given enough time to gel. Nevertheless the match, and the whole day, was a great occasion which was played in a great spirit.

Although this has been a disappointing season for TCRUFC, the future looks bright with Hughes and Clark leading the team next year. I would also like to thank a number of players sadly leaving the club and who have been great servants: Camsell, Jones, Chan, Pressling, Biddlecombe, and Foster-Davies. It has been a pleasure playing with them all.

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## Trinity College Tennis Club

*Alexander Wettig (2016)*

It has been a good year for the Trinity College Tennis Club. Michaelmas started off with a large intake of enthusiastic Freshers joining the teams. Soon matches were played in the intercollegiate League. Trinity I secured a safe joint 4th place in Division I, beating Homerton and Christ's 6–0. Meanwhile, Trinity II, consisting predominantly of newcomers, came joint 2nd in Division IV, however mainly due to two 6–0 fortunate walkovers. Nevertheless, there is much potential for the second team as many players showcase very strong techniques.

In Lent, the focus was on Cuppers, for which we entered two teams. Sadly, Trinity II lost despite a strong effort 2–7 in the first round against Catz II. Our first team

managed to beat Caius I 6–3, but was beaten in the quarter finals by Catz I, which had previously beaten our long-standing rival John's I.

Our club has a long tradition of playing friendly matches against our sister college Christ Church, Oxford, and against a team of lawyers from the Bar. This year, we drew in both fixtures.

Mentions must go to our fantastic first pair Marc Bonaventura and Matt Hassall, the impressively consistent Warach Veeranonchai and the jolly Paul Warchuk for some first-class performances in the first team, while for the Seconds David Zhang, Balazs Bukva, Balazs Nemeth, Callum Wainstein, Elijah Mak, Frank Cudek, Morgan Williams, Pascal Reeck and Vlad Badelita deserve recognition for their spirit and commitment. Next year the captaincy will pass from Alexander Wettig to Matt Hassall, who will bring much experience to the job, having been captain in 2015–16 already. His contagious enthusiasm for tennis will further invigorate and strengthen the Trinity tennis community and will likely result in tangible results in the League and Cuppers.

## Trinity Volleyball Club

*Kelly Wing (2017)*

The Volleyball Team had a great year! During Chaplain's Squash, we managed to entice 53 freshers to sign up for the team. Training has always been a blast! From getting super pumped up to upbeat music (e.g. Queen), deciding on different practice teams each training via random guidelines (e.g. Nike vs no-Nike) to attempting double-blocks and jump serves, the team was able to bond and form close friendships during the year whilst improving our volleyball skills. As Trinity shares a joint Volleyball team with Queens' College, it was a wonderful way for everyone to meet people and make friends outside College. We also had a few people from other Colleges who emailed asking to join in on practices (e.g. Selwyn, Downing...). Our first Cuppers game was especially memorable – so many people from the team turned up that we had to rotate between three full sets of players to ensure that everyone got playing time. We performed extremely well and had a great time! Although matches from Cuppers and Christchurch sports day were definitely highlights, we also had an amazing time outside the court. The team organised socials, taking place in Gardies and Queens' Bar. We also participated in a swap at Nanna Mexico

with the other volleyball teams in the Cuppers League! A huge shoutout to my wonderful co-captains Sarah and Kristina who both go to Queens', and to Jirka, last year's captain, for his guidance. This year wouldn't have been a successful one without them. I look forward to being a part of the team again next year!

## Trinity College Yoga Society

*Joshua Heath (2011)*

The Trinity College Yoga Society has continued to flourish in 2018–19. Having added a third class to our weekly offering in 2017–2018, we have not only maintained that class, but added a fourth, as well as facilitating a special 'Exam De-Stress' course for undergraduates in Easter Term. With drop-in rates and multi-class passes heavily subsidised for students and non-academic staff through the generosity of the College, together with well-managed class sizes, Trinity Yoga Society offers perhaps the best environment in the University for the development of a rigorous yoga practice. Our classes are open to all Trinity members, and we have worked hard this year to engage especially with Trinity staff and post-doctoral members. Members of the wider University are also welcome. We continue to benefit immensely from the expertise of our principal teacher, Shaili Shafai, who this year received her Senior Teaching certificate. Our intermediate and advanced students have certainly felt the benefit of the introduction of more complex poses to the teaching repertoire.

Our four regular classes cater to a range of levels of experience, with two serving those members of the College who are beginning to develop their yoga practice, whilst the other two are oriented toward more experienced practitioners. Two of our weekly classes are also primarily offered to College staff, with a number of College departments, such as Catering and Housekeeping, well represented. The Society is especially keen to ensure that these classes remain affordable, and to that end strives to offer discounted rates to those who might not otherwise be able to enjoy regular, teacher-led exercise and wellbeing classes. Moreover, the Society now runs classes almost every week in the calendar year, aiming to maintain at least one class during the vacation periods, so that regular students can maintain their practice through the year.

In addition to these regular classes, the Society was approached by the Tutorial Office and invited to facilitate a special course of classes for undergraduate

students during ‘Exam term’, in conjunction with TCSU. Through the generosity of the Tutorial Office, these classes were offered free of charge to up to fifteen undergraduates per week throughout the examination period. Taught by Jane Durkin, these classes were held on Friday mornings with the aim of both clearing minds and energising bodies for the coming day. These classes were well attended, with some students attending every class offered within the course, which is surely testimony to the benefits that Jane’s course provided! We hope to offer the course again in 2019–20.

A three-hour workshop, held in Lent Term, completed our class offering this year. With almost twenty attendees, this workshop combined vigorous sequences of poses with an exploration of yogic breathing techniques (Prāṇāyāma). The Society intends to make such workshops a regular feature of our termly activities, and we have timetabled a workshop for every term in 2019–20.

As we look to 2019–20, the Yoga Society’s focus will be on increasing attendance across all four of our regular classes, and ensuring that all sectors of the College community – undergraduates, postgraduates, postdocs, Fellows and staff – are well represented in our classes. To that end, we are looking to appoint a dedicated Communications Officer, who will take care of weekly communications with the College community, look after our soon-to-be-launched webpage, and also take responsibility for the production of a Yoga Society term card.

It remains for me to thank our outgoing President, Matthew Maitra, our incoming treasurer, Brett Gutstein, as well as Fiona Holland and Dr. Jean Khalfa for their contribution as members of the TCYS Committee. We very much look forward to welcoming new practitioners in Michaelmas 2019!

## Trinity College Students' Union and Societies

### Trinity College Students' Union

*Emily Song (2017)*

This year has once again been a busy one for TCSU, kicking off with the welcoming of the new cohort of Freshers to Trinity College with our jam-packed Freshers' Week. TCSU successfully ran an array of events, aiming to ensure there was something available for everyone and to help the new students settle in to Trinity life. These ranged from bowling, to night-time punting, to a Freshers' garden party on the beautiful Fellows' Bowling Green, and wrapping up with our usual Nevile's Ent. A huge thanks goes out to the Fellows, numerous College departments, the TCSU Committee and student volunteers for the smooth running of the week.

As Michaelmas Term got into full swing, students new and old settled into the new year. We made sure to keep events up through term to give students opportunities to get involved in activities outside of their studies.

TCSU's Welfare officers began to run weekly welfare teas in the refurbished welfare room, offering students a relaxed and comfortable space to take a break from studies with the help of tea, coffee and biscuits. We also hosted a number of themed formals across the term with the help of the Catering Department, namely a New Orleans Formal with a drinks reception accompanied by live jazz music in the stunning OCR, and followed by jazz music in the College Bar. Following this, Halloween Formal offered students a scary, but still delicious, themed menu.



Freshers at Nevile's Ent, wrapping up Freshers' Week.

Other events on offer through Michaelmas included our usual Halloween bop featuring a number of impressive costumes (one student even dressed up as the Great Court Fountain), and lively nights in the bar with a student jazz band. We wrapped up with the Bridgemas bop, again in our ever-busy bar, with mulled wine and plenty of mince pies going around.

With Lent Term came the Multi-Ethnic Formal run by our former BME Officer and current Computing & Publicity Officer, Kiran Jolly. This was a wonderful celebration of ethnic diversity, welcoming students from all over the University to our Great Hall, and sold out quickly. Events celebrating diversity such as this were accompanied by discussion forums run by TCSU officers, such as a BME forum, LGBT+ forum and Women's forum – these provide spaces for students to open up about potentially sensitive issues in an understanding environment.

As February rolled around, it was once again time for the Committee to hand over. Two members continued from the previous year, and the other places were filled by enthusiastic new faces, with an abundance of exciting ideas.

The new committee started off by introducing a new weekly TCSU newsletter, which lists events, updates and notices from TCSU, in order to keep students updated on our activities. These activities include keeping up our usual events, such as the College Family Formal to commemorate the formation of College families, as well as introducing new activities, such as movie nights.

LGBT+ History Month (February) was a brilliant celebration of diversity and inclusivity. Trinity was kind enough to put the pride flag up at the entrance to College on the first and last day of the month – a special mention must go to Anna Dimitriadis, our former LGBT+ Officer, for helping to get this into place. In addition, the Trinity Gardeners created an exquisite rainbow crocus display on Brewhouse Lawn, which was admired by students and tourists alike. Alex Atkin, our current LGBT+ Officer, also ran an LGBT+ Formal on the last day of the History Month, inviting students from across the University to celebrate equality and diversity.

Easter Term came around soon enough, through which TCSU ran a number of welfare events. These aimed to give students the opportunity to relax and have a break from their revision, as well as to provide advice on how to handle exam stress.. These events included weekly yoga sessions (with the kind support of Tutorial), gardening and mindfulness workshops, in addition to the usual weekly

welfare teas. We hope that these events enhanced the supportive network that is already in place at Trinity thanks to our Tutorial system.

Other events in Easter included a Eurovision screening and a ‘megabop’ with three other Colleges. We ended the year with the TCSU Garden Party on the Fellows’ Bowling Green, complete with a live jazz band, brown bread ice cream, fresh strawberries, cocktails and a variety of garden games, such as giant Jenga and croquet. This was a fantastic way to wrap up the year and was very much enjoyed by all those attending.

Aside from the various events TCSU has held this year, the Committee also works hard to enhance College life for undergraduates, with weekly committee meetings and termly open meetings to discuss student concerns. This year has been a successful one, with much being achieved. Blue Boar Common Room is now bookable by Trinity students, providing a perfect space for student and society events, and making good use of a previously under-utilised room in College. Wolfson Seminar Room was also used as a communal working space in Easter Term, giving students a great environment for collaborative revision and work on projects. The most exciting achievement of the year has been the approval of lighting along Fellows’ Walk in Burrell’s Field, which has long been a student concern at Trinity. This lighting will alleviate students’ worries regarding safety when walking through Burrell’s Field in the evenings. A special



The 2019-20 Committee at Formal Hall with Andrew Bowyer, Chaplain.



Enjoying the May Week Garden Party on the Fellows' Bowling Green.



Concentrating on croquet.

thanks must go to Molly O'Brien and Frankie Postles of the previous committee for getting the ball rolling, and to the Junior Bursar and other College staff for their support in the initiative.

This year has been an active and rewarding one for TCSU, and we look forward to continuing our contribution to Trinity life in the new year.

## Trinity College BA Society

*By Isabel Vallina Garcia (2012)*

The BA Society represents and entertains the Graduate community at Trinity College, with more than 350 full members (Masters, PhD and clinical medicine students) and 100 associate members (fourth year and mature undergraduates). 2018–19 has been yet another successful year for the BA Society. I cannot state enough what an honour it has been to take on the role of President of the Society this academic year, to get the opportunity to represent my fellow BAs at College Committee meetings and to give something back to the Graduate community here at Trinity College – a community that feels like a second family to me. From a personal standpoint, it has been an enriching and rewarding experience and I cannot thank enough my supportive, committed and enthusiastic Committee for dedicating so much of their time and energy to plan and run events, to look after the welfare of the Graduate student body and to make all of our experiences here at the College that little bit better and more memorable.



A group of BAs at the Harry Potter Studio tour during the 2018 Summer Term.

With our Handover at the end of Easter Term last year, the first event organized by the Committee was the BA Society's Garden Party in June 2018. This was a resounding success with plenty of good food, Pimms and acoustic music. This was followed by the summer term, which as per usual is a quieter time, but which we still managed to fill with a wide range of exciting events. This included World Cup match screenings, a Harry Potter Studio Tour, a couple of evenings of Summer Shakespeare, a trip to the BBC Proms in London, formal dinner swaps with other Colleges and the SIX Musical.



The 2018–2019 BA Society Committee set and ready for Freshers' Week!

The Summer Term was followed by an intense although exciting 12 day-long week – Freshers' Week! This marks the start of the new academic year and allows us to welcome the new cohort of BAs. Overall, Freshers' Week ran very smoothly and the incoming cohort of BAs settled quickly into the wider BA Community. The most popular events were as per usual our High Tea Party, our Wine & Cheese Reception (followed this year by a dance Afterparty) and our Fellows' Panel and International Food Night.

Throughout the rest of the year, we have had a packed calendar of events! Amongst other activities, in Michaelmas we learnt how to make sushi, visited the Tower of London, attended the "Shakespeare in Love" play at the Cambridge Arts Theatre, tasted chocolate from all around the World, went ice-skating and cheered for Cambridge at the Varsity Rugby match. Michaelmas Term was also particularly exciting as we elected our fantastic First Year Reps! Lent Term was also great, featuring the "My Fair Lady" and the "Lion King" musicals, the "Edward II" play at the Sam Wanamaker Playhouse, a tour of the College's Catering Department where we learnt all of its secrets (albeit not the recipe for the College's well-known Crème Brûlée!), a cocktail mixing workshop and yet another opportunity to cheer for the Light Blues at the Ice-Hockey Varsity Match held in the Oxford ice-rink.

Easter Term has been equally exciting, with our Great BA Bake Off where our very own Graduates showed off their culinary skills, the BA Petting Zoo where we met many new fluffy and feathery friends, the "Romeo & Juliet" Ballet in London and



BAs at Parkrun!

the “Evita” and “Hamilton” musicals. Throughout the entire year, we have also continued to organize the Society’s regular events, including BA Brunches, BA Bar Nights (some of which we have turned into BA Quiz Nights), BA Parties after dinners (some of which have become BA Chill Nights) and the BA Book Club. We have also introduced new regular events, such as the BA Board Games Nights and Parkrun, which have been very popular and well-attended this year.

In addition to the above cultural, sports and entertainment events, we have also continued to organize the popular BA Seminar Lunches, which promote academic discussion. At these Seminars, three BAs present their research to other students and Fellows. Overall these have been very popular throughout the year, with plenty of BAs signing up to deliver a talk and share their findings with the rest of the community. The BA Society is extremely grateful to the Graduate Tutors and Secretaries who help us to organise these events. We also highlighted the amazing collections in Trinity’s Wren Library with termly tours run by Dr Nicolas Bell, to whom we are very thankful for his engaging talks!

Our Welfare Officer, as well as our Women’s and LGBTQ+ Officers, have done an excellent job creating a supportive, welcoming and warm community. With regards to Welfare, this year we have offered an extremely varied range of

activities ranging from craft nights to a Petting Zoo. Thanks to the hard work of our Welfare Officer, we have also held regular Mindfulness workshops throughout the entire year, as well as introducing the popular BA Cookery classes, where BAs have taught each other how to cook dishes from all around the world. There have also been plenty of exciting events organized by our Women's Officer and our LGBTQ+ Officer. Highlights included our special brunch to celebrate the beginning of LGBTQ+ History Month in Lent Term and the poetry writing and photography workshops, to celebrate alongside the College the 40th anniversary of women at Trinity, in Easter Term.

During our BA Dinners & Feasts on Fridays, which have been consistently popular and well-attended every term, we have continued to tour the world, this year focusing on specific Festivals. Our Catering Officer even brought back from Iran her family's very own recipes, which we all tasted in Hall! BA Dinners are the cornerstone of the Graduate Community, bringing together over 200 BAs and their guests at the end of each week to dine, catch-up and meet new people. A particularly special dinner was the Burns Night Dinner, where we had haggis, bagpipes and a dagger. One of our own students, Anna Louise Christie, gave a fantastic reading of Robert Burns' 'Address to a Haggis.'

It is also worth noting the changes made to the BA Rooms this year, which include the purchase of a new, shiny coffee machine, a Bluetooth speaker and new tables. We have also installed new shelves to create additional storage space and we have



BAs at one of our bar parties after BA dinner in Hall.

installed our BA Life Mural – a board where BAs may attach items that represents their personalities, whether it is drawings, photographs or quotes!

The BA Society highly values input and feedback from its members. This year we ran two main surveys, one during Lent Term and another during Easter Term, where BAs were able to have a say on key aspects of Graduate College Life, ranging from welfare support to gym facilities to wifi provision.

Overall, it has been a fantastic year for the BA Society! Such work was made possible by the hard work of all fifteen BA Committee members and the close co-operation and support of the College. A special thanks to the Tutorial Office, the Catering Department, the Works Department, the Graduate Tutors and their secretaries, the Porters and the Accommodation Office, without whom many events could not have happened last year.

## Trinity College Christian Union

*Alex Hilton (2018) and Joshua Brown (2018)*

The TCCU has continued to work to provide the opportunity for every student to hear the good news about Jesus, and to be a space for Christians at Trinity to discuss, study, and pray together.

We meet weekly to socialise and read the bible together, in addition to further weekly prayer mornings. Dial-a-Doughnut also featured regularly, where we were able to discuss with other students questions they had about Christianity over a doughnut. Our annual pizza dinner proved to be popular with incoming Freshers at the start of the year but Christmas soon approached, bringing with it the CICCUC and local churches' carol services. Lent Term followed and it was time for Events Week, where the CICCUC put on twice-daily talks around the theme of "Tomorrow". Students from all over Cambridge, including some Trinity members, came to hear and discuss matters of purpose, self-worth, and ambitions.

Finally, in Easter Term, we put on a Grill-a-Christian event where three Christian academics were 'grilled' for over an hour by students about their faith. We thank Gui for his work as solo-rep over the last year, and also the other members of TCCUC for assisting him in his role. We hope to continue with our aim to make Jesus known in Cambridge over the next year, and remain a welcoming community within Trinity.



## Trinity College Medical Society

*Susannah Ashfield (2016)*

The goal of the Trinity Medical Society is to strengthen friendships between medics across the years of study, to provide advice and support to younger students and to host academic talks that allow students to hear from inspiring academics and pioneering clinicians.

This has been an exciting year for the Society. We enjoyed a series of talks by speakers representing many disciplines in medicine. First, we welcomed Professor Sadaf Farooqi who discussed the role of genetics in obesity. Next, Professor David Rubinsztein provided a fascinating overview of the role of ‘neuronal waste disposal’ in neurodegenerative disease. Finally, Professor Lalita Ramakrishnan spoke to us about the pathogenesis of tuberculosis, one of the top ten causes of death worldwide, and her research into the basis of vastly different susceptibilities to this disease.

Alongside the talks, the Medical Society held events to bring pre-clinical and clinical students together, building friendships and enabling older students to pass on advice and support.

At the beginning of the year, new medics were warmly welcomed into the Trinity family with the traditional Freshers’ tour of the faculty and welcome event. In Lent Term, we held an event where third years gave advice to second years about Part II subject choices, providing first-hand accounts of their experiences of each subject. Throughout the year we organised events with other Colleges, establishing ties with medical students from across the University.

Finally, we held a garden party on the Bowling Green to celebrate the end of the academic year and say goodbye to the newly graduated doctors.

I would like to thank the Committee for their help this year, and Dr Richard Hayward for guiding us as Senior Treasurer. I also wish Will Foster and the new committee the best of luck for the coming year.

## Trinity Oriental Society

*Michael Ng (2017) President 2018–19)*

I can say with great pleasure that the Trinity Oriental Society has enjoyed another fantastic year. Looking back through the countless photos from this year's plethora of events, both old and new, it makes me smile to see the joy of our members delighting in the free food, cultural activities and the heart-warming student welfare that our society brings. And with this fond nostalgia, I invite you to indulge in a summary of this year's events, and some of the many entertaining anecdotes along the way.

Our first event was the Chaplains' Squash, a crucial opportunity to attract hungry Freshers to sign up. This proved fruitful (perhaps partly due to the authentic snacks from Hong Kong, manually imported by one of the committee members?), and our icebreaker event- the 'Freshers' Squash' witnessed a healthy turnout. A fascinatingly large proportion being maths students!

With ambitious targets in mind, we hosted an event almost every week throughout Michaelmas Term. Pepero Day, for which members post humorous photos of others to receive a box of Pepero (Korean chocolate sticks) delivered to





their pigeon-hole, was a success, and so were the two Film Nights, including the Japanese anime movie classic ‘Kimi no na wa (Your Name)’.

We decided to bring back ‘Kimchap Making’ this year. Kimchap is a Korean dish akin to sushi, without raw fish. For true authenticity, we enlisted the help of a good Korean friend (thanks, Gheehyun!) to recommend his recipe, including Korean radish, a special root vegetable, a unique ham and much more. One of the exciting parts of preparation for these events is the sheer scale of the amount of food – there’s nothing quite like getting up earlier to start cooking 12 cups of rice in the morning! There were limited places so members had to sign up beforehand. Some of them proved to be experienced, producing rather exquisite seaweed rice rolls – an important life skill indeed. The event was a resounding success.

The exhilarating game ‘Mahjong’ – as featured in a scene of the film ‘Crazy Rich Asians’ – is an essential part of Chinese culture, and so we created ‘Mahjong Night’ – an original event for this year. The President and other experienced players were available to teach members the basics, moving onto simple tips and strategies. The students impressed us with their rapid learning, and some even tried the other less talked about game of the Japanese variant known as ‘Riichi Mahjong’. It was particularly moving to see some of them then being able to teach others.

Fuelled by the success of these events, we moved into Lent Term, hosting the Kimbap Making session and Mahjong Night once again. This year, there was a particularly exciting end to the traditional 'Fire Ramen Challenge' – in which members try to eat a plate of scorchingly spicy noodles (enjoyed by some as a casual snack in East Asian countries!) as quickly as possible. We recorded the competition, and it was fortunate that we did, for it was a 'photo finish' – we had to scroll back frame by frame to see who finished that fateful final mouthful first!

The highlight of the year however, was our flagship event – the Trinity Oriental Society Dumpling Festival, in celebration of Chinese New Year. This year, we wanted to make it even more magnificent, with the aim of not needing to impose a limit on the number of dumplings each person could eat. The result? Through much forward planning, asking friends for extra pots to cook with, and even running through the snow to collect final pieces of cutlery (who knew that Sainsbury's could run out of forks?), we managed to cook 1100 dumplings over a few hours. Yes, 1100, of six different fillings, allowing our members to delight in the deliciousness to their hearts' content. Over a hundred members attended the event, and the dumplings were finished in less than an hour! The most rewarding aspect of the festival were international members (e.g. Jason!) thanking us for making them feel as if they were at home celebrating Chinese New Year.

I am incredibly grateful to my outstanding committee members this year – to Hazel, for being a fantastic Vice President; to Weida, for her excellent secretarial support; to Jimmy, for sending entertaining emails and spreading publicity; to Yiannis, for sorting out the funds; to Kelly, our bubbly honorary committee member (haha) and to Rui, for her remarkable reliability in booking all the rooms (and for carrying a Mahjong set from Peterhouse!). I thank my College father and last year's TOS President Andrey, for inspiring me to take on such an exciting and rewarding role. And we all thank Trinity College and our wonderful members for allowing this lovely society to keep growing. I have thoroughly enjoyed every moment of my role this year, and it is with my best wishes that I place the Trinity Oriental Society into the capable hands of Ivan Chan, President for next year.



## Trinity Politics Society

*Clare Francis (2017) and Lara Jenkin (2017)*

Trinity Politics Society is a forum for insightful and engaging political discussion, and this year it was amongst the most active of collegiate political societies. Led by Co Presidents Clare Francis and Lara Jenkin and a newly-recruited (and very hard-working!) committee, and with some much-appreciated regular attendees, the Society ran fourteen events throughout the year.

We began Michaelmas with a Freshers' mingle, where Daniel Zeichner, MP for Cambridge, spoke to Trinity's new arrivals about the importance of political engagement. Our second event of the year was a panel discussion on rough sleeping in Cambridge, with representatives from local charity Jimmy's Night Shelter and Councillors Nichola Harrison and Tim Bick. The Society's next two events attracted very different demographics: the first was a talk from Will Tanner, former Deputy Head of Theresa May's policy unit, on centrism in modern Britain, and the second – co-hosted with Trinity Science Society – featured Julian Huppert on his career in science and parliamentary politics.

In early November, we ran our largest event of the term: a live recording of David Runciman's Talking Politics podcast, hosted the morning after the US mid-term elections. Despite the early start, the audience enjoyed the warmth of the Winstanley and a fantastic breakfast spread, very kindly supplied by Trinity's Catering Department. Our final event of Michaelmas Term was an engaging and important discussion on period poverty, co-hosted with Trinity College Feminism



The audience during our live recording of David Runciman's Talking Politics podcast.



The Committee (from left to right, beginning top row): Luke Hallam, Gabriel Shear, Lara Jenkin, Adam Fereday, Benedict Springbett, Rosa Rahimi, Ishbel Russell, Clare Francis, Maelle-Marie Troadec.

Society, and led by Amika George, founder of #FreePeriods, and WaterAid CEO Tim Wainwright.

Lent Term began with a discussion co-hosted with Cambridge University Israel Society, from Joan Ryan MP on Labour's Israel policy and antisemitism within the party. We then hosted Marie Le Conte, critically-acclaimed political journalist, for a more light-hearted Q&A about Westminster gossip and her well-known Twitter account, @youngvulgarian. Our third event of the term, co-hosted with Trinity College Feminism Society, was titled 'Tehran Streetstyle: Intersections of Illegal Fashion, Gender, and the State in Iran'. Activist and author Hoda Katebi, in conversation with Dr. Evaleila Pesaran, provided an insightful account of the relationship between fashion, women's activism and the Iranian state. This was followed by a topical talk from Dr. Matthew Goodwin, author of *National Populism: The Revolt Against Liberal Democracy*, on the resurgence of populism.

Our fifth event of the term, 'Everyday Democracy: A World for and by the People', was co-hosted with King's College Politics Society. The two-panel event aimed to assess whether the idea of 'everyday democracy' offered solutions to some of the most pressing issues of our time, from governmental accountability to housing crises in post-disaster zones. We concluded Lent Term with a talk delivered by prize-winning journalists Isabella Ginor and Gideon Remez. The event offered

a historical reassessment of the USSR's intervention in the Arab-Israeli Wars – and many fascinating Cold War-era anecdotes! – and was jointly hosted with Cambridge University Russian Society.

As ever, Easter Term brought with it a hefty revision workload, and so the Society hosted only two events. The first, co-run with Emmanuel College Politics Society and the Cambridge Canadian Club, was a talk by the Hon. John McCallum, who served as Canadian Minister of Citizenship and Immigration from 2015–16. The audience greatly enjoyed hearing an insider's perspective on the Trudeau government and Canadian politics. We wrapped up a successful year with one of our most well-attended events to date: a screening of *Persepolis* with an introductory speech from Dr. Nina Ansary, author of the multiple award-winning book *Jewels of Allah: The Untold Story of Women in Iran*.

We hope this year's many and varied events afforded attendees a refreshing break from the day-to-day routine and occasional stresses of Tripos. After two years, we're proud to be handing over the Co Presidential reins to Rosa Rahimi and Adam Fereday, who we're sure will continue to provide high-quality events and – of course – wine and cheese.

## Trinity RAG

*Harry Bestwick (2016), Amelia Hutchinson (2017), Alex Spencer (2017), Harry Symes (2017), Poppy Gilks (2017) and Mina Frost (2016)*

The academic year of 2018–2019 has been a superb year for Trinity RAG – we have been represented by five students across second and third year (Harry Bestwick, Amelia Hutchinson, Alex Spencer, Harry Symes, Poppy Gilks), in addition to some keen first years for some of our more popular events, and supported by Mina Frost – one of the Central Cambridge RAG co-chairs. This army of volunteers very successfully promoted all the relevant Central RAG events in Trinity – these included RAG Blind Dates (raising over £200 in Trinity alone!), Jailbreak, 'Lost', and Welfare Goody Bag deliveries.

Our main event of the Trinity RAG calendar is the Easter term auction. This year, a major advertising boost from our dedicated Trinity RAG Auction Instagram, and a collection of items and experiences including fine wines, luxury toiletries, Trinity Ice Cream, and a private Wren Library Tour, coupled with a raffle on

the evening, made for a very successful event indeed. A special thanks goes to Muhammed Manji who acted as auctioneer for the evening, and also managed to auction a Trinity Porter's Bowler Hat for an enormous £140!

Overall, we have been delighted at the success of this year's Trinity RAG calendar, and we look forward to seeing more events (and more fundraising!) in the coming year.

## Trinity Responsible Investments Society

*Sofia Taylor (2015)*

This year was very exciting for the Trinity Responsible Investment Society, which is only in its second year. It was founded with the goal of exploring the role of investments in shaping a better world. As the first elected committee, we didn't have a clear blueprint on how to run the Society. This gave us flexibility to figure out how best to achieve that goal. Our activities this year can be divided in three categories: education, College interaction and AGM activism.

We held several speaker events to learn about Responsible Investment, by institutional investors. We learned about how our values can shape our portfolio, and how we engage with our holdings. Our speakers also stressed how common holdings can be contrary to our long-term goals.

In Lent we focused on College-wide engagement. This was focused on the Trinity Responsible Investment Forum, held in February, which brought together the many views held in College about our own investments. As a consequence of this forum, TRIS was invited to attend the AGMs of several companies from Trinity's holdings, and bring our concerns to their board members. We also held a workshop with ShareAction on how best to engage with companies at their AGM. This work was the main focus of Easter Term, with a group of us attending the meetings of BAE, Shell and BP. While most of our discussions were focused on the Climate Emergency, we see a lot of potential for addressing other issues that concern many Trinity members.

It was overall a very stimulating year, and we look forward to many more talks in the new year, as well as our College-wide discussions. We would also like to thank the Senior Bursar Rory Landman and our Senior Treasurer Dr Hugh Hunt for their support.

## Trinity College Science Society

*Ruslan Kotlyarov (2017)*

It was another successful year for the Trinity College Science Society. Thanks to the great work done by the previous committee, we were able to run the Society smoothly and implement new ideas. By extending a collaboration with CU Scientific Society, we were able to host another Garden Party and our second Summer Internships Event.

We have continued our pursuit of diversity: this year we expanded the scope of our talks by inviting not only researchers from hard sciences, but also linguists, politicians, and the author of the Compound Interest website. It was the Society's greatest honour and privilege to host Professor Sir Gregory Winter for a talk on his Nobel Prize discoveries. His lecture proved so popular that the Winstanley Lecture Hall could have been filled six times!

As a science society, we served the Trinity scientific community not only by organising career-related events and weekly talks, but also by bringing students and researchers together. Our inaugural 'Tea, Cream, and Scones Society' meeting has proved a large success thanks to wonderful scones made by the Catering Office. The traditional Annual Symposium, followed by the dinner in the Old Kitchen, was a very well-attended conclusion for a busy year.

I am eternally grateful for the support of the committee members, both past and present, and wish best of luck to the successors.

## Trinity College Serbian Society

*Ivan Tanasijevic (2014)*

Just as in any other year, the first activity of our society was to introduce ourselves to Freshers at Chaplains' Squash. Soon after that, we organised a gathering with the purpose of getting to know our new members. We held our AGM in October and the election of the new committee was celebrated with a "Week Five" party, a great way to get a relief from the built-up stress of the first term.

Our most important event of the year was the feast for Saint Sava's day, the first Serbian Archbishop and the patron saint of all educational institutions in Serbia. On this occasion we introduced our members to the role of Saint Sava, performed



a traditional cutting of the celebratory cake, and brought some Serbian delicacies from a restaurant in London. On the 15th of February, we celebrated the Serbian Statehood Day. For this event, we were helped by some of our members who made plenty of traditional sweets. The Orthodox Easter day was on the first Sunday of Easter Term and our members enjoyed traditional painted egg tapping.

Apart from these events, we organised a few additional gatherings. This included a meetup at the start of every term in one of the local restaurants. Finally, we closed off a successful year with a barbecue at the end of the term, after all the exams were over.

## College Choir

*Paul Nicholson*

The first rehearsal of Michaelmas Term took place in the middle of September, when we welcomed 11 new Choir members. The ‘new’ Choir returned a little earlier than usual so that they could sing Evensong for those attending their Annual Gathering and music for the Feast in Hall.

In December, the Choir gave their annual performance at St John’s Smith Square as part of the SJSS Christmas Festival, singing Bach’s *Christmas Oratorio* accompanied by the Orchestra of the Age of Enlightenment. Three of the four



The Choir performing in Overture Hall, Madison, WI on 11 September 2019.

soloists were recent Choir alumni: soprano Katherine Watson (2005), mezzo-soprano Helen Charlston (2011) and tenor Gwilym Bowen (2008).

The Choir gave three lunchtime concerts in Chapel over the academic year. For the performance in Lent Term, the Choir performed in concert with the Yale Glee Club, who were touring the UK. The concert finished with the two Choirs joining forces for a rousing performance of Stanford's *Coelos ascendit hodie*.

In January, the Choir returned to College to record the *Stuttgarter Psalmen*, amongst other works, by Finnish composer Jaakko Mäntyjärvi. We were delighted that Mäntyjärvi was able to attend these recording sessions and are very excited by our collaboration with him on his music.

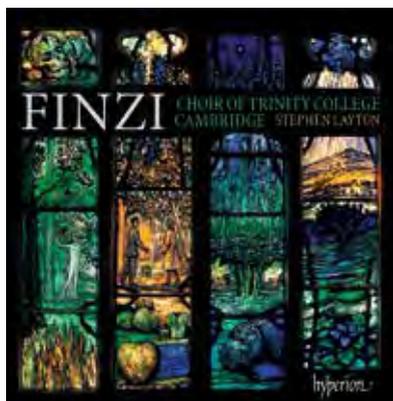
In April, the College held an event to celebrate 40 years of women undergraduates at Trinity at which the women of the current Choir and members of Trinity College Choir Association premiered a commission by Joanna Forbes L'Estrange, the lyrics acknowledging the women who have played a part in the history of the College. The title – *A place for us maids* – is a play on the words on the banner which was displayed in 1897 by those who successfully voted against

the motion to allow women to obtain Cambridge degrees equivalent to those offered to their male counterparts. The Choir performed the commission at the close of the welcome speeches, which was well received by the many Fellows, staff, students and alumni attending the event.

The annual Singing from the Towers and Singing on the River concerts took place on the last Sunday of Easter Term and, despite grey clouds, almost 3,000 people came to the Backs to hear the Choir sing from punts.

In July, the Choir travelled to Italy, Luxembourg and Cologne. The first venue, Giardini La Mortella in Ischia, was the home of composer Sir William Walton and his wife Lady Susana Walton, who created the stunning sub-tropical gardens. The audience warmly appreciated the combination of early English music and close-harmony arrangements of the Choir's Singing on the River programme. Next, the Choir performed in Cathédrale Notre-Dame, Luxembourg, as part of a series marking 175 years since the founding of Luxembourg Cathedral Choir, before a final concert in Kirche St Pantaleon, Cologne.

The Choir's latest recording, *Choral Works by Gerald Finzi*, was released in August and features choral favourites including *God is gone up* and *Lo, the full, final sacrifice*, as well as unaccompanied songs. *Gramophone* chose the recording as their Editor's Choice saying it is a 'beautifully crafted disc' which shows 'Trinity at their absolute best'. *Classical Source* gave the recording five stars, stating that they 'cannot imagine performances better than these.'



The Choir's most recent release, a recording of music by Gerald Finzi.

The Choir has recently returned from a three-week tour of the United States, during which they gave nine concerts. The group travelled to New Haven, Madison, Atlanta, New York, Cleveland and Pittsburgh, finishing the tour in Texas with concerts in Porter, Houston and Dallas.

Full details of the Choir's CD releases, forthcoming concerts, live and archive webcasts of services and YouTube videos can be found at

**[www.trinitycollegechoir.com](http://www.trinitycollegechoir.com)**.





## FEATURES

HARNESSING THE POWER OF EVOLUTION  
TO CREATE NEW MEDICINES –  
THE MASTER'S WINSTANLEY  
NOBEL LECTURE

MAKING A WAY FOR WOMEN:  
EDUCATION AND ENFRANCHISEMENT

CELEBRATING TRINITY MATHEMATICS

BRADFIELD THE BUILDER





## Features



Graham Copekoga

### Harnessing The Power of Evolution to Create New Medicines by Sir Gregory Winter (1970)

*The following account is based on the talk given by the Master on 13 February 2019 in the Winstanley Lecture Theatre.*

The work that led to the Nobel Prize was initiated at the Medical Research Council Laboratory of Molecular Biology (MRC-LMB) in Cambridge, and was developed for practical application within the Medical Research Council Centre for Protein Engineering, and three Cambridge biotechnology companies I helped to found: Cambridge Antibody Technology, Domantis and Bicycle Therapeutics. For much of this time I was a Senior Research Fellow of the College.

In this lecture I will explain how the tools of molecular biology were used to create new medicines, new companies and a revolution in the pharmaceutical industry. But I first need to tell you about the chemistry of life. Every cell in your body is a chemical reactor, each undertaking millions of chemical reactions. The reactions are undertaken and/or orchestrated by three polymers – deoxyribonucleic acid (DNA), ribonucleic acid (RNA) and protein – each polymer relying on another for its synthesis, as dependent on each other as the chicken and the egg.

- **DNA** comprises four chemical building blocks (deoxyribonucleotides) and is synthesized by proteins (DNA polymerase enzymes) using one strand of DNA as a template for the synthesis of a complementary strand to generate a double-stranded helix.
- **RNA** also comprises four chemical building blocks (ribonucleotides) and is synthesized by proteins (RNA polymerase enzymes) from



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DNA templates. Whereas DNA is a stable molecule, and acts as the store of genetic information, RNA is much less chemically stable. Its main functions are connected with the synthesis of proteins.

- **Proteins** consist of 20 chemical building blocks (amino acids). Proteins are synthesised by an RNA machine (the ribosome)<sup>1</sup> from an RNA template with the order of amino acids specified by the sequence of nucleotides in the template. Proteins come in a wide variety of shapes and perform many different functions, for example as enzymes to catalyse chemical reactions, as hormones, as receptors or as structural fibres. It is the order of amino acids in proteins that dictates their structures and functions, and it is protein that executes the chemical operations ultimately specified in the DNA of the genes. This can be summarised as “DNA makes RNA makes protein”, sometimes referred to as the central dogma of molecular biology.

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1 It was for his elucidation of the structure and mechanism of the ribosome that Venki Ramakrishnan shared the Nobel Prize for Chemistry in 2007.

The 1970s saw the development of tools for manipulating DNA and thereby the encoded proteins. For example, by inserting the genes for human proteins into bacteria, the bacteria can be turned into factories for production of those proteins. Such applications led to the creation of human therapeutic proteins such as insulin and erythropoietin (EPO) in fermenters by early biotechnology companies such as Genentech and Amgen, and later to enzymes with novel catalytic activities and to therapeutic antibodies, of which more below.

### Antibodies

In the mid 1980s I became interested in antibodies. These proteins form a major arm of our immune defence system and are elicited by infection with a virus or bacterium, or immunisation/vaccination with a foreign protein. When antibodies recognise and bind to a foreign protein (or antigen) they can block the activity of the antigen, as in the case of snake antiserum. If they recognise pathogens such as viruses or bacteria they can block the infection, and are also capable of killing the pathogen. Antibodies are the ultimate xenophobic molecules – they obstruct and kill anything foreign!

Antibodies are Y-shaped protein molecules (Figure 1), and assembled from domains, each domain comprising a fold of about 100 amino acids. The domains are arranged in four chains, two identical heavy (red) chains and two identical light (white) chains. And at the tips of the Y, the “variable” domains (striped) of heavy and light chains come together to form the antigen-binding site; both domains contribute to binding of antigen. Close inspection of this region reveals a protein

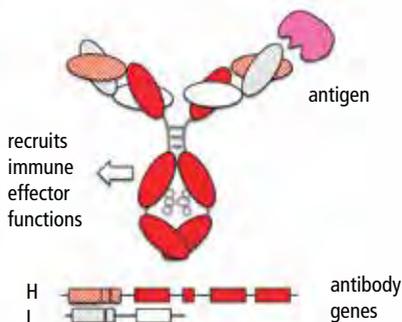


Figure 1. **Antibody structure and function.**



Figure 2. **Antibody single domain.** Master with antibody single domain. The grey ribbon is a smoothed representation of the path of the protein backbone. Arrows mark N>C direction. See p124 for further details of single domain and antibodies.

scaffold surmounted by loops (Figure 2); the loops are of different sequence and structure in different antibodies, with the potential to recognise a wide range of pathogens and block their action.

Antibodies also have another string to their bow. In the stem of the Y, they have binding sites for other immune molecules and cells, allowing the antibody to recruit a range of killing mechanisms. For example, antibodies may recruit phagocytes to eat the attached pathogen, or natural killer cells to rain chemical toxins on the pathogen. The antibody is a molecular Swiss army knife and potent agent against infectious disease.

You may wonder how the immune system quickly rustles up antibodies that recognise foreign antigens, including pathogens it has never encountered before. The answer is that it has already made millions of different antibodies and it selects and amplifies the production of those able to recognise the

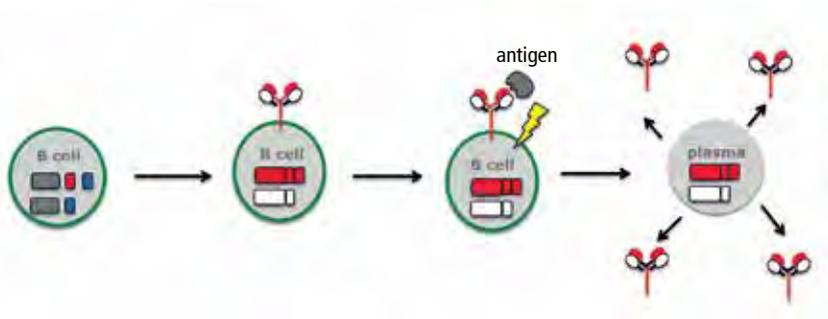


Figure 3. **How the immune system makes antibodies.**

foreign antigen (Figure 3). Antibodies are created in white blood cells (B-cells) by recombination of different gene segments, with each B-cell displaying a different antibody on the cell surface depending on the combination used. When an antibody on a B-cell recognises and binds to a foreign antigen, the B-cell is stimulated to multiply and differentiate into cells (plasma cells) that secrete large amounts of the antibody. In this way the foreign antigen elicits the antibodies that will block and destroy it. The immune system is in effect a system for the fast evolution of antibodies, in which a Darwinian package (the B-cell, with linked phenotype and genotype) is subjected to selection by antigen.

Shortly after antibodies were discovered in the 1890s, clinicians wondered whether antibodies could be turned against non-infectious disease such as cancer. However, there was a fundamental problem – the human immune system does not see human cancer cells (or human proteins) as foreign and doesn't make antibodies against them. The good news is that the problem can be solved by the application of genetic engineering, and it has led to a revolution in medicine and in the pharmaceutical industry. Many of the world's best-selling pharmaceutical drugs are antibodies, and used for treatment of cancer, and for autoimmune inflammatory conditions such as rheumatoid arthritis, Crohn's disease and psoriasis. I would now like to explain how the problem was solved, and my role in that story.

### **Humanised Therapeutic Antibodies**

By 1975 scientists at the MRC Laboratory of Molecular Biology had developed a method for making mouse cell lines (hybridomas) that secreted monoclonal\* antibodies against many different antigens, including human antigens.

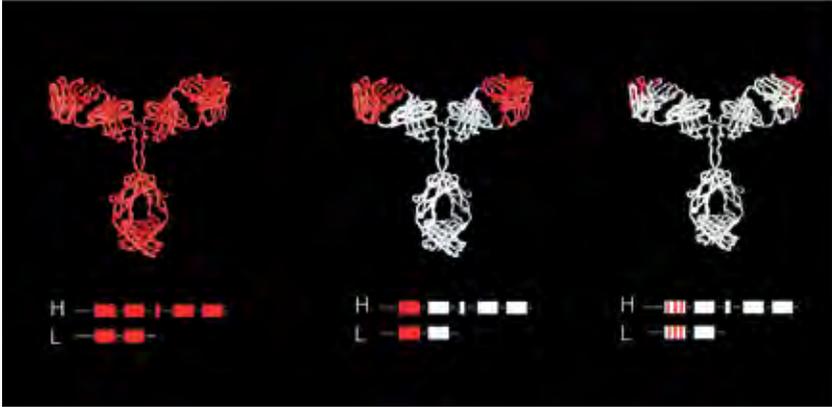


Figure 4. **Engineered antibodies.** Left to right, antibodies and genes encoding mouse, chimaeric and humanised antibodies.

However, when used to treat patients, these mouse antibodies were seen as foreign and elicited human antibodies that blocked their therapeutic action, usually within ten days. In the mid 1980s we turned to genetic engineering to solve the problem and tried to make the mouse antibodies look more human. We did this by combining mouse antibody genes with their human counterparts, aiming to transfer the antigen-binding activities of the mouse antibodies into human antibodies (Figure 4). Michael Neuberger, late Fellow of this College, first constructed human antibodies with the complete antigen-binding domains from a mouse antibody; these chimaeric antibodies were about 65% human. With Michael's help I took a more radical approach and constructed human antibodies with only the antigen-binding loops from the mouse antibodies; these "humanised" antibodies were up to 95% human. It became clear that we could transplant the antigen-binding activity by either approach.

But what would happen if these antibodies were used in patients? Working with colleagues in Cambridge University Department of Pathology, we created a humanised antibody to attack and kill human white cells. This antibody was then put it into two patients in Addenbrooke's Hospital with non-Hodgkin's lymphoma; not only did the antibody destroy a large mass of spleen tumour but the treatment could be extended over 30 days without any evidence of blocking antibodies. This was the first clinical use of an engineered antibody and it ignited interest in therapeutic antibodies from a range of biotechnology and pharmaceutical companies.

Which brings me to patents. I had filed a patent on the “humanising” invention; see for example the main claim of one of the US patents for the poetry of the language<sup>2</sup>:

*1. An altered antibody or antigen-binding fragment thereof, wherein a variable domain of the antibody or antigen-binding fragment has the framework regions of a first immunoglobulin heavy or light chain variable domain and the complementarity determining regions of a second immunoglobulin heavy or light chain variable domain, wherein said second immunoglobulin heavy or light chain variable domain is different from said first immunoglobulin heavy or light chain variable domain in antigen binding specificity, antigen binding affinity, species, class or subclass.*

In view of the interest from industry we had to decide on a licencing strategy. Should the MRC assign the patent exclusively to one industrial partner, granting them a monopoly to exploit the technology, or should the MRC issue non-exclusive licenses to multiple companies? There are advantages and disadvantages with each approach, but we chose the latter in the belief that it was more likely to create a greater range of antibody medicines. To encourage the wide use of the technology, the MRC charged only a modest upfront payment (£25,000) for each licence and set royalty rates at less than 2% of product sales. More than 40 companies were issued with licenses, and the US Food and Drug Administration has since approved nearly 20 humanised antibodies as medicines, more than any other kind of therapeutic antibody. Many more humanised antibodies are in clinical development. Although the patent has now expired, it generated over GBP £500 million in revenues to the MRC in its lifetime. A lot can hang on the wording of patent claims and on the choice of licencing strategy!

### **Human Therapeutic Antibodies**

In the late 1980s we thought that humanized antibodies would be an improvement on mouse antibodies, we didn’t know how successful they would become. We still thought of the creation of fully human antibodies as the Holy Grail, and wondered if genetic engineering might provide the solution. Gradually a simple idea took shape. Perhaps we could make human antibodies as follows: (a) clone the antibody genes from a large population of human cells;

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<sup>2</sup> the complementarity determining regions largely correspond to the antigen-binding loops.

(b) introduce the genes into bacteria so that it makes the encoded antibodies, and (c) screen the antibodies for the binding activities required. This approach is analogous to a locksmith who makes a large bunch of different keys and then tries them out on an unknown lock.

The first problem was how to clone the human antibody genes? Existing methods would have been too slow, so we developed a method using the polymerase chain reaction (PCR) in which the genes were repeatedly copied using synthetic pieces of DNA and polymerase enzymes. After a couple of years our methods were good enough to clone 100 thousand heavy and 100 thousand light chain genes from the human B-cells in half a litre of blood.

The second problem was that we didn't expect the human B-cells to be making antibodies against human proteins. We therefore reshuffled the antibody heavy and light chain genes to create new antigen binding activities; reshuffling 100 thousand heavy chain genes and 100 thousand light chain genes had the potential to create nearly 10 billion new antibodies.

The third problem was how to screen the binding activities of billions of antibodies? Returning to the analogy above, if the locksmith had to test billions of keys he would likely be dead before he had finished his task. We needed to find a way of screening all the antibodies at the same time. Fortunately, George Smith, my Nobel co-Laureate, was developing the use of bacterial viruses (also known as phage) to display small peptides. We decided to use the phage for display of antibodies; the phage can be regarded as a Darwinian package, and when used to display antibodies as an analogue of the B-cell (Figure 5). After

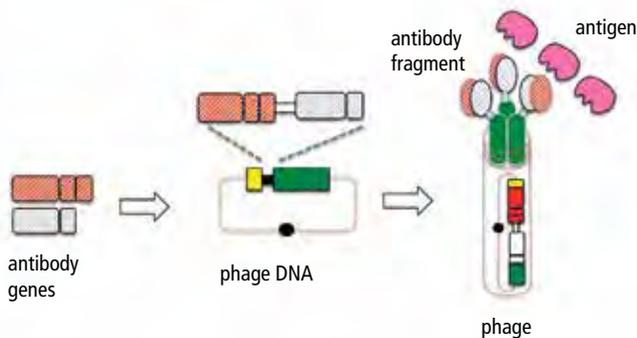


Figure 5. **Phage antibody.** Left to right, antibody variable genes, stitching variable genes onto phage coat protein gene, phage with antibody fragment displayed on coat protein with binding to antigen.

cloning our libraries of antibody genes into phage, so that each phage displays a different antibody fragment on its coat, the library was passed over an antigen-coated surface to capture the binders. We then used the genes of the captured phage to rebuild complete antibodies against the target antigen.

The method worked well. From a single test-tube of library, containing 10 billion phage antibodies, we could isolate antibodies with a wide range of binding activities. In due course this method was used to generate the first human antibody, Humira (adalimumab), to be approved by the US Food and Drug Administration as a medicine. Humira is directed against the human inflammatory protein TNF, and is used to treat rheumatoid arthritis, Crohn's Disease and psoriasis. Humira has been the world's best-selling pharmaceutical drug with sales peaking around \$18 billion per year.

### **Cambridge Antibody Technology**

A critical element in the development of the phage antibody technology was the foundation of Cambridge Antibody Technology. I should explain how and why it was founded. Early in the development of my ideas for making human antibodies from gene libraries, I was alarmed to discover a similar interest by a group at the Scripps Research Institute, which had teamed up with a San Diego biotechnology company, Invitrogen. I urgently needed to have more space and resources to develop my ideas. I was told by the MRC that I had enough staff, there was no spare space, and to talk to other UK companies and enlist their help.

My conversations with industry went something like this, 'Well, this is an interesting idea, but what's wrong with humanised antibodies? We've just invested millions in setting up that technology. Are you telling us it doesn't work?' I said, 'No, humanising is a brilliant technology, I invented it, but this might be better. 'Dr Winter have you actually made a library of billions of clones?' 'Well, no, I've made about a thousand, but I'm quite sure we could expand it to a billion. It's obvious to me, as a technocrat, we can do that.' 'Okay, do you know how you're going to select it?' I said, 'Well, there's several possible ways, but, actually, I don't know yet,' 'And you want to select one antibody from several billion others?' and I said, 'Yes, we'll sort it out somehow, just give us the money and we'll sort it'. So they said, 'Okay, Dr Winter suppose all this works. What is the current market for antibodies in the world?' I think I suggested about £5 million – at that stage there were no therapeutic antibodies on the

market. So they said, ‘Well, let’s suppose you take half the market, and get £2 million per year – it’s going to cost at least that to get this technology set up. It just doesn’t stack up.’ I countered “But if we can do it, the market will expand as we bring out therapeutic antibodies.” And they said, ‘Well, Dr Winter, why don’t you come back in a year or two’s time, when you’ve done some more work’. But I knew that speed was of the essence, and I couldn’t wait.

There were some people I talked to who had a different attitude. Although the majority were cool, and I even got referred to as the mad Dr Winter, others were warm and said, “That’s a really cool idea. Can I help you?” Encouraged somewhat, I began to think about setting up my own company. One of the key helpers was an Australian scientist, Geoffrey Grigg. Years earlier he had come over from Australia on a sabbatical to visit the MRC-LMB, and at the request of Fred Sanger (double Nobel Laureate) I’d agreed to accommodate Geoff in my laboratory. Geoff was no longer doing experiments, but he had some prior association with King’s College, and he liked going in there to drink wine and to lunch and dine, but he needed to have a laboratory base in Cambridge to validate his trip to his Australian employers. I was short of space, but liked Geoff and squeezed him into the end of a fume cupboard.

Geoff had a nice time in Cambridge, and we kept in touch. One day Geoff rang and said, ‘Look, I’ve been getting some information about a new method you are trying to develop...I will be in Cambridge tomorrow and want to see you for lunch.’ I went to the Garden House Hotel and listened to Geoff. Not only was he excited by my ideas for making human antibodies, but he offered to help set up a company. Some years earlier in Sydney he had set up his own company, Peptech, to develop a slow-release peptide to bring on ovulation in horses, a matter of interest to the horse-breeding and racing industries. He had raised the money on the market, directly from the “mums and dads of Australia”. He told me that the Peptech Board would bank roll my start-up company – the key shareholders were in the racing industry and had the attitude “If our mate Geoff says it’s a good bet, let’s go with it.” Later one of the shareholders said in referring to me “Give the boffin the money and let’s see how he trots.” It was so refreshing to see biotech investments treated like racing bets!

We put together a deal in which Peptech took an equity stake in the start-up company Cambridge Antibody Technology, and paid for the scientist who then developed the phage screening technology in my laboratory. Another key helper, a former scientist at Amersham International became the Managing Director of

the company, and set about drumming up contract business. Our most important contract proved to be the development of the human antibody Humira. In 1997 the company floated on the London Stock Exchange, with a valuation of £100 million. I stepped off the Board before flotation, because the science was established, and I couldn't stand all the financial arguments on the Board. In 2006, Cambridge Antibody Technology was acquired by AstraZeneca at a valuation of over £700 million and has continued to generate antibody medicines.

### **Single Domains & Domantis**

Antibodies have many advantages as medicines. However, they also have some disadvantages. In particular they are large proteins and do not easily escape from the blood vessels into tissues, or get deep into tumours. I wondered if this could be solved by shrinking the antibodies.

One of the reasons that antibodies are so large is that they are formed from four associated chains, each comprising multiple domains (see Figure 1). Could we strip down antibodies into single domains? In particular could we pull apart the heavy and light chain domains involved in antigen-binding? In the late 1980s we had managed to make single domains with antigen-binding activities, but found they were prone to aggregate. In the late 1990s, Ian Tomlinson, a former PhD student and Trinity Junior Research Fellow, discovered that some human single domains were less prone to aggregate. We decided that the time had come to develop these single domains as small antibodies and to do this through a start-up company.

In 2000 I arranged a three-month sabbatical to the CSIRO Laboratories in Sydney where I was hosted by Geoffrey Grigg. Over many more lunches than necessary, we discussed our next start-up company. However, Geoff was no longer on the Board of Peptech or had much influence with the management, but after I returned to Cambridge, there was a change of management in Peptech, and Geoff's influence grew. There is much more to this story, but in the end Peptech made an investment of USD \$20 million into a new company (Domantis) to develop antibody single domains. Ian Tomlinson became the Chief Scientific Officer, and Domantis won several contracts to develop single domain antibodies for other biotechnology and pharmaceutical companies. In 2006 there came a cash offer of £230 million for the company from a large American pharmaceutical company, which then backtracked on its offer. By

that time GlaxoSmithKline had also become very interested in Domantis and after a nail-biting due diligence matched the offer. By 2007 Domantis had been incorporated into GSK, and a veil of secrecy descended on their activities.

## Bicyclic Peptides & Bicycle Therapeutics

Back in my academic laboratory, work from a postdoctoral worker was leading us in a different direction. We wondered if, instead of dismembering antibodies, we could make small antibody mimics. These could be even smaller than those built from antibody domains. The idea was to mount peptide loops onto a chemical core; the peptide loops would bind antigen and the core would act as a scaffold to hold the loops in place (Figure 6). Using this approach, we made libraries of bicyclic peptides by mounting the peptides on a trivalent chemical core. By screening the libraries by phage display, we found that we could make molecules with potent binding activities to human proteins. Nevertheless, I knew it would be a long haul to develop these “bicycles” as medicines, and that we would need a start-up company to do it.

In the meantime, Geoffrey Grigg had died, and Peptech had suffered a merger and takeover, so I had to look for new sources of funds and open minds. Fortunately, a former postdoctoral worker had become a venture capitalist and she offered to help. In 2009, she assembled other investors and we founded the company Bicycle Therapeutics. We decided to focus on oncology, and to use the bicycles to deliver and release potent chemical toxins at tumour sites. We started by making bicyclic peptides against proteins that are expressed at high levels on the surface of tumour cells and not on normal cells. We then coupled the bicycles to toxic chemicals through linkers cleavable by enzymes produced

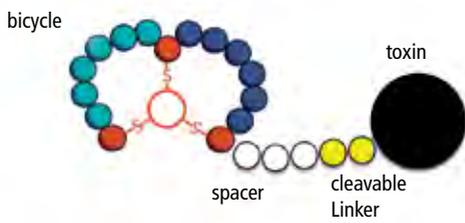


Figure 6. **Bicyclic peptide.** Shown conjugated to a toxin through a cleavable linker.

at high levels by tumours. The bicycle-toxin conjugates are unable to enter cells and are not toxic, but when the toxin is cleaved it can enter and kill cells. By using the bicycle to hold the conjugate on the surface of tumour cells we can selectively cleave the toxin at the tumour.

The good news is that we found such conjugates to be well tolerated in mice and able to kill large tumours. [At the time of writing we are undertaking a phase I clinical trial sponsored by Cancer Research UK to see how well these conjugates are tolerated in humans, and to establish the maximum tolerated dose. In May 2019 we floated Bicycle Therapeutics on Nasdaq to raise the money to undertake a phase IIa clinical trial for efficacy, to develop further toxin conjugates against other tumour markers, and to develop bicyclic peptides that can activate and bring cytotoxic T-cells to tumours.]

At the beginning of this lecture I referred to the central dogma of molecular biology “DNA makes RNA makes protein”. Sydney Brenner once quipped that the central dogma of biotechnology was “DNA makes RNA makes protein makes money.” He was right, but what an exciting and satisfying way of making money!



## Making a way for Women: Education and Enfranchisement Amelia Hutchinson (2017)

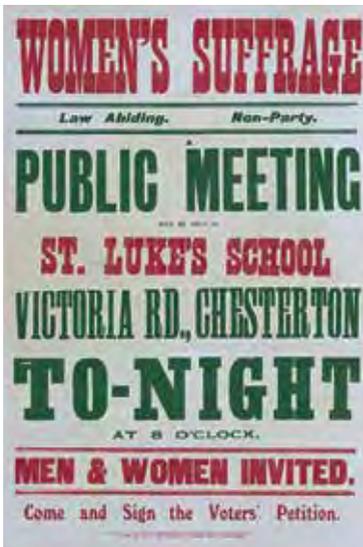
The past few years at Trinity have been marked by a series of anniversaries – celebrations recognising forty years of female postgraduates, Fellows and undergraduates at the College. Additionally, 2018 marked the centenary of the ‘Representation of the People’ Act, which gave some women the ability to vote. These anniversaries regarding the furthering of women’s positions in society, and the progress made through the twentieth century, are important for many different reasons. They celebrate not only the great moments themselves, but also the people who lived through them, the people who fought to make them possible, and the people who have been working for further progress ever since. As a female student at Trinity, who has frequently exercised her right to vote, I find it all too easy to forget the privilege that I have, and to forget the resistance that many faced as they struggled to ensure that these are now normalized features of society. Learning about the lives of some of the many individuals who helped to bring about these moments which we now celebrate, especially those who were closely linked to both Trinity and Cambridge as a whole, is an important part of being able to properly engage with the anniversary events.

The path leading to the 1918 Act, and indeed to the eventual full enfranchisement of women, was in many ways a gradual one. Women’s increasing involvement in philanthropic organisations and in local government throughout the late nineteenth century was a central component of their later efforts to obtain political equality. The late nineteenth century did see some advances. In 1869 the Liberal politician Jacob Bright amended borough electoral qualifications, with women now forming around 17% of the electorate, and by 1900



Emily Davies (ONDB).

over one million women had the local vote.<sup>1</sup> 1870 saw the implementation of the Elementary Education Act, which allowed women to stand for positions on school boards in a very public way. Though just one example of women's increasing involvement in public life, their roles in local government helped to change the mind of several MPs, who began to comment that it seemed illogical that women were 'holding their own' on school boards, yet were unable to vote by secret ballot.<sup>2</sup> Yet for many women, these changes did not go far enough. For instance, Emily Davies (Mistress of Girton College) wrote to Barbara Smith Bodichon in the 1860s saying that there was nothing new in women working together, and that 'the new and difficult thing is for men and women to work together on equal terms'<sup>3</sup> a call which would remain a significant part of women's campaigning for many years to come.



Cambridge University Library.

As Dr. Lucy Delap has emphasised in her work for the University Library looking at a collection of local and national suffrage posters, the issues of women's enfranchisement and women's education were often intimately linked. Delap sees the first women's colleges to have been set up as a bedrock part of the women's movement and, although the heads of these colleges may have been cautious about threatening their own positions by ardently supporting the suffrage movement, they were home to some of the most active suffrage (and perhaps more surprisingly, anti-suffrage) groups.<sup>4</sup> Yet involvement in the women's movement was not something which solely revolved around Girton and

Newnham. From 1884, Cambridge was home to the Cambridge Women's Suffrage Association (CWSA), which had links to the wider campaign forwarded by the NUWSS (National Union of Women's Suffrage Societies). On 18<sup>th</sup> July

1 Hollis, P., *Ladies Elect: Women in English Local Government 1865–1914*, Clarendon (1989), p.31

2 *Ibid.*, p.40

3 Hollis, P., *Ladies Elect*, p.15

4 Delap, L. cited in 'Our Weapon is Public Opinion', <https://www.cam.ac.uk/suffrage>.

1913, the Cambridge Independent Press reported that the CWSA were organizing a procession for the 19<sup>th</sup> July in connection with the suffrage pilgrimage<sup>5</sup> that was being carried out by the NUWSS. But it was not just suffrage organisations that were active in Cambridge, but also individual women and men who promoted and facilitated these campaigns.



Mary Somerville.

In 1865, the Liberal philosopher John Stuart Mill was elected MP for the City of Westminster, running on a platform which included votes for women. In 1866, after a committee from the Kensington Society had gathered the 100 signatures for which Mill had asked, he presented the first mass women's suffrage petition to Parliament. The petition holds many names recognizable to us today, such as mathematician Mary Somerville, whose son attended Trinity, and who visited the College several times to see her friends the Sidgwicks. Somerville was a personal friend of J. S. Mill, writing to him three years later thanking him for his book, *'On the*

*Subjugation of Women*. In her published collection of letters, she explained that 'The British laws are averse to women; and we are deeply indebted to Mr. Stuart Mill for daring to show their iniquity and injustice.'<sup>6</sup> Somerville wrote that she herself was a Liberal, since she 'resented the injustice of the world in denying all those privileges of education to my sex which were so lavishly bestowed upon men.'<sup>7</sup> Another name which stands out on Mill's first petition is that of Augusta Webster, poet and essayist, who was married to the Trinity College Fellow Thomas Webster. An active member of the London Suffrage Society, Augusta Webster was the only person from Cambridgeshire recorded as having signed J. S. Mill's initial petition,<sup>8</sup> and involved herself in promoting women's education

5 Sutherland, G., 'Hold fast, hold firm, hold out', cited in [http://www.trumpingtonlocalhistorygroup.org/personalities\\_MillicentFawcett\\_Campaign.html](http://www.trumpingtonlocalhistorygroup.org/personalities_MillicentFawcett_Campaign.html)

6 Somerville, M., *Personal Recollections from Early Life to Old Age of Mary Somerville, with selections from her correspondence by her daughter, Martha Somerville*, (1873), p.344

7 Ibid, p.45

8 The Pethick-Lawrences, A Radical Partnership, <https://trinitycollegelibrarycambridge.wordpress.com/2016/11/10/the-pethick-lawrences-a-radical-partnership/>

and rights in her writing, for instance in her bittersweet work, *A Woman Sold* (1867), and *A Housewife's Opinions*, in which she discusses 'University Degrees for Women' and 'University Examinations for Women'. She wrote openly about her disdain for the 'nominal' degrees that women were getting, noting that 'the private recognition by the examiners that Miss So-and-So has the attainments which could have earned her a degree does not confer on her the convenient University mint-mark...the young woman who has only been politely assured that she would have had the degree if she might, is to the exoteric public no more than she was before...'<sup>9</sup> Although Webster is a poet who has lain understudied for many years, she was recognized by some of her contemporaries, such as Christina Rossetti, who called her 'by far the most formidable' poetess.<sup>10</sup>



Portrait of Agnata from Girton College.

Augusta Webster is by no means the only woman linked to the College who fought for a better social and political position for women. In 1912 Agnata Ramsay, classicist and ardent advocate for the education of women, gave a speech at the G.P.D.S. (Girl's Public Day School) Educational Trust, emphasizing this intimate link between the two overlapping spheres. Agnata Ramsay was a skilled classicist, who had studied at Girton College, and had, in 1887, been the only student to place in the First Division of the Classical Tripos (although, of course, she was not awarded a degree for her achievement). Her intellectual abilities were what led Henry Montagu Butler,

Master of Trinity, to invite her to the Master's Lodge to watch a performance of *Oedipus Rex*. They were soon married with Butler writing to a friend that it was 'her goodness, not her Greek and Latin, which have stolen my heart'.<sup>11</sup> Agnata's time as Master's wife, however, did not mean that she abandoned her passion for the Classics, as a speech she delivered at the Perse School urging students to take up studying the Classical authors demonstrates. Nor did she halt her efforts to improve women's positions within society. During her talk to the G.P.D.S.,

9 Webster, A., 'A Housewife's Opinions', p.90

10 Leighton, A., *Victorian Women Poets: A Critical Reader*, Blackwell (1996), p.227

11 Butler, J.R.M., *Henry Montagu Butler, Master of Trinity College 1886-1918*, Longmans (1925)

Agnata emphasized the importance of education, as it is ‘in school you begin to think more widely’. In talking about the widened sphere of opportunities for women, Agnata mentions how women ‘now find their places quite naturally on Boards of Guardians, on Borough Councils, County Guilds, in Parliament, in Government offices, as doctors, barristers, solicitors...’.<sup>12</sup> Agnata was aware of the progress that had been made over the course of her life, and urged young women not to forget the debt that they owed to the pioneers who had fought for them – a message that perhaps rings true today, where our ability to access higher education, and indeed to vote, can easily be taken as a given. Importantly, at the time of this speech, delivered in 1912, women had not yet received partial enfranchisement (property-owning women over the age of 30 were given the right to vote, as well as all men over the age of 21, only in 1918). Thus, whilst Agnata’s words remembered women such as Emily Davies, Anne Clough and Henrietta Stanley, this was paired with a strong emphasis on a continued struggle, as she encouraged young women to use the new opportunities available to them to work to build a better future for their successors.



Ellen McArthur.

There are not only examples of women using their own power, positions and voices to promote the enfranchisement and education of females, but also of how women were working within the social and political milieu – working with other women to build relationships and promote their cause amongst influential men. As Shils and Blacker write, ‘the idea of marriage as a working partnership was unusual in general then. However, Cambridge pioneered several such alliances: the Fawcetts, Batesons, Peiles, Verrals etc. Women’s education and the end of celibacy for Fellows brought about a change; women’s voices were beginning to be heard, in harmony or in descent.’<sup>13</sup> One

example of women reaching out to other women, asking them to persuade their husbands to support their cause can be found in the Wren Library, in the form of

12 Handwritten speech by Agnata Ramsay to deliver to the G. P. D. S. Educational Trust, (Wren Library, JRMB M4/11)

13 Shils, E. and Blacker, C. (eds.), *Cambridge Women: Twelve Portraits*, Cambridge University Press (1996)

a letter from economic historian Ellen McArthur to Lady Thomson. Josephine Thomson was married to J. J. Thomson, Master of Trinity, and in February 1910 received a request from McArthur on behalf of the NUWSS to encourage her husband to sign the 'humble petition' for the enfranchisement of women on equal terms with men, which he had been sent the previous week. McArthur wrote that she wanted 'as impressive a list as [the NUWSS] could get with such short time for work'. McArthur's question of 'Do you think he could be persuaded to sign it if he is in favour of our very moderate request?' is a rhetorical one, as she then tells Lady Thomson that there is no need for her to respond. Clearly, McArthur believed Lady Thomson would be successful, although the unsigned copy of the petition enclosed with the letter may indicate otherwise. Nonetheless, it demonstrates the mechanisms used and the relationships forged between women in order to promote women's causes in a way that some thought to be most effective.

Many different women worked in many different ways to promote the enfranchisement and education of women – at Trinity and beyond. Their methods, experiences, and names are too numerous to cover in so brief a piece. Yet what remains crucially important, as we celebrate the anniversaries of moments of tangible change, is not to subsume individual lives and efforts into a single moment, or, as Agnata phrased it, to forget the debt we owe to those who went before us. Though not the *same* cause or struggle, it is clear that the issues of enfranchisement and education were intimately linked – especially within the university environment. The women who are mentioned in this article are ones who made one or both of these issues a significant part of their identities, and promoted those causes to others. For some, this involved public speeches, for others it involved poetry and writing, and for others a more personal form of persuasion. Their efforts, and the efforts of many others who sought to create a better future for their successors, are certainly worth uncovering and remembering.



## Celebrating Trinity Mathematics Arthur Norman (1980)

In 1919, when students returned to Cambridge after serving in the Great War, Trinity already held a distinguished place in the world of Mathematics. Of course it was proud of Newton, but it could also look back on Charles Babbage, James Clarke Maxwell, Arthur Cayley and the recently departed Ramanujan, and simply look around to see Hardy, Littlewood, Bertrand Russell, G I Taylor, Eddington and a further host of powerful minds. Any attempt to list those associated with Trinity either becomes long and unwieldy or omits a number of important individuals. Against this background the Trinity Mathematical Society was founded so that junior members could gather, socialize and hear lectures from some of the more established names. This society survived to



become the oldest extant subject society at any university in the country. To mark its 100th anniversary it held a two day symposium and a grand dinner in Hall in February.

The program for this involved two days of lectures, where on the first day each speaker either spoke about a mathematician from one particular decade or had themselves been here and involved with the Society such that they could represent their own decade. The audience included returning Society members from a wide range of years – some more than 50 years in the past – as well as a number of the current 800+ members of the Society and most of the College mathematics Fellows. There was, of course, special coverage of the lives of G H Hardy and E A Milne who had been instrumental in founding the Society, but we also heard about Bertrand Russell, Frank Anscombe and G I Taylor as well as having personal reports on Trinity in the 60s, 70s, 80s, 90s and the new millennium from those who had been running the Society then. Of course the Important Members of the TMS who had been responsible for showing how to build a square from a collection of different-sized smaller squares (leading to the current TMS logo) were in all thoughts and are present in the photograph on page 133.

Before the dinner an amazing collection of past presidents of the Society were able to gather (along with other external guests). To commemorate Newton's contribution to understanding, each Society meeting is traditionally closed by dropping an apple (just in case by some terrible mischance it might not fall properly!), so here are some of the more recent presidents carrying out the important experiment, surrounded by a range of their predecessors.



Following the dinner, at which Imre Leader was able to remind us of some of the strengths of the current Trinity Mathematics team, as well as noting the recent losses of both Michael Atiyah and Peter Swinnerton-Dyer, the second day of the event was dedicated to current work around Cambridge by some of those who had had substantial involvement in the Society. This covered topics ranging from fairly extreme pure mathematics through to the less tidy end of applied (or applicable) mathematics.. For instance, one presentation explained to the audience why the value of  $\exp(\pi \sqrt{163})$  has a value that is quite unreasonably close to being a whole number, while another was concerned with the prevalence of dementia.

Being full of mathematicians, the TMS naturally views the number 100 as special and worth celebrating. However having found the celebration so much fun, the society observes that one can no doubt find reasons for viewing many other numbers (for instance 101, 202,...) as quite important too. So rather than waiting another 50 or 100 years, it would be very good if TMS could celebrate itself continuously! And at the very least it is intent on continuing in its original mission, which was that it should 'promote the discussion of mathematical interest'.

While preparing for the centenary the following document, provided by the daughter of E A Milne, was brought forward, and copies were made available to all who attended the symposium. With first-hand accounts of the foundation of the TMS, it is very directly relevant to the society today. So thanks are due to the Milne family for preparing it and passing it on to us.

## A Hundred Years Ago: the Birth of the Trinity Mathematical Society

A single letter<sup>1</sup>, preserved in private hands for over fifty years and now in the College archives, reveals the origin of the TMS. It was written by my father EA Milne after speaking at the 200th meeting in reply to a thank-you letter from the Vice-President.

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1 Letter from EA Milne to CH Elsey-Warren, 30 January 1939, Trinity archives

Dear Mr. Elsey-Warren,

*I have received in my life few letters which gave me as much pleasure as yours, undeserved by me as your remarks are. It is most good of you to write as you have done, and your letter together with the enjoyable time I had on Friday, both before and at the meeting, have done a great deal to cheer me up at a rather difficult time of my life.*

*The suggestion that a mathematical society be founded (or re-founded) after the war in Trinity originated in a letter which Prof. Hardy wrote to me when I was still at Portsmouth. There had been no such society in existence in my earlier time at Trinity (Oct. 1914–March 1916) though I believe one had existed, and had come to an end, sometime before the war. Anyhow Hardy stated his views, and said it was up to me, as one of the senior returning mathematical undergraduates, to do something about it. I well remember journeying up from Portsmouth in RNVR uniform and changing into “civvies” for the occasion of the meeting in S Chapman’s rooms in A Great Court. I remember too wondering how far the newly started society would be self-supporting and how far it would have to rely on dons; and hoping, too, that (a) few dons would turn up at meetings to be addressed by undergraduate members. From what I saw the other night, the Society is thriving and self-supporting, and I think that intense credit is due to the present and past generations of officers for giving complete continuity of existence to a society which, I know, is not one of those which runs itself. The 200 meetings have all meant hard and willing work; moreover 200 meetings in less than 20 years is a very good score.*

*I hope very much that it may be my privilege to come and attend some future meetings of the Society when I happen to be in Cambridge. May I also say that the Society seems to me very fortunate in its present and “present-past” officers? I hope that many of us may foregather on the occasion of the 500th meeting, which I stand an even chance of surviving to.*

*Yours very sincerely,*

*E A Milne*

Curious as it may seem, Hardy was partly responsible for Milne being in Portsmouth. In 1916 Hardy, an ardent pacifist, had declined to apply his brilliant mind to aerial defence, and instead had recommended Milne, whom he rated “one of his best pupils”<sup>2</sup>. The upshot was that Milne left his undergraduate studies to join a pioneering team that transformed gunnery into a science<sup>3</sup>. He thrived on the mathematical challenges of ballistics and in early 1919, by then a naval lieutenant, and despite the Armistice, was busy at the gunnery school HMS *Excellent* at Portsmouth.

According to the minute book – the first fourteen pages are by Milne – Saturday 15 January was the date of that preliminary meeting attended by ten young mathematicians together with Chapman and JE Littlewood, Hardy’s great collaborator. Milne chaired an informal discussion about forming a society run by junior members of the college, i.e. not attained MA status. It was agreed that a subcommittee of EF Collingwood, WR Dean and RVH Roseveare would draft a set of rules, and to re-convene at the beginning of the Easter term.

Only a week later, on Saturday, 22 February, they re-assembled. Again Milne came up from Portsmouth to act as chairman; again Chapman hosted the meeting. (The minutes are headed “Trinity Mathematical Club”.) Milne outlined the club’s purpose: to discuss “matters of mathematical interest” by the “exchange and ventilation of views on mathematical topics”. The subcommittee was tasked with drafting the constitution and management of the club, and terms for officers and members.

By the Easter term the club had become a society. While Hardy was its inspiration, Milne had nursed the practicalities. The meeting on 29 April 1919, devoted to private business, is written up as the “First”. It was held in I Great Court, the rooms of Roseveare, who acted as chairman. Milne, now demobbed and in residence in L Great Court, acted as secretary. The draft rules were adopted and the twenty-one junior mathematicians present were elected to membership, including S Pollard who was elected president. Among Honorary members elected were Hardy, Littlewood, Chapman, RH Fowler, and two elderly fellows, WW Rouse Ball and JWL Glaisher. Rouse Ball’s *Mathematical Recreations and Essays* is currently in its 13th edition. Glaisher was president of the British Association for the Advancement of Science in 1890, and as a boy had flown in air-balloons with his famous father.

<sup>2</sup> Letter from AV Hill to WH McCrea, 2 November 1950, EA Milne papers, Bodleian Library

<sup>3</sup> See *The Fountain* 18 Spring 2014 pp.10–11. Weston Smith M., “Trinity and the Birth of Modern Gunnery”

The fledgling society, which predates the University mathematics society, the Archimedean, was now ready to engage in mathematics, and on 6 May Milne gave the inaugural talk, “Gauss’s Error Law”, followed by Hardy on 21 May with “Elementary Theory of Infinite Number”. Come the autumn, the Society was in full swing with a smartly printed card announcing the programme for the Michaelmas term and two pages of printed rules. Meetings, usually on Wednesdays, took place at 8:30pm in the evening in someone’s rooms, and finished with coffee. (No ceremonial apple.) The subscription was two shillings a term, about £4.50 in today’s money.

Milne was now president of the TMS. Furthermore he had been elected a Fellow – and never completed his undergraduate studies. While tremendously exhilarated by the fellowship, which enabled him to send money home, and gave him the freedom to continue in mathematics, he felt naïve sitting at high table among the scientific giants and august company. This is reflected in his account<sup>4</sup> of the TMS evening of 29 October held in Littlewood’s rooms D Neville’s Court.

*We held a great meeting of the Trinity Mathematical Society the other night. I was in the chair and Prof. Eddington gave a paper on “The Equilibrium of a Gaseous Star”. . . I was not aware who was present at the back of the room, but when the paper was finished and I had made a few rather inadequate presidential remarks, what should I hear but the big booming voice of Rutherford at the back, starting to heckle Eddington. I can tell you I felt my remarks to be less adequate than ever. Eddington and Rutherford assisted by Hardy, Littlewood, (CG) Darwin and Fowler kept up the discussion for one and a half hours, to the no small delight of the mass of undergraduates present. It is very rare indeed that an unpremeditated discussion between two such eminent men as Eddington and Rutherford can be overheard by other people. The meeting was, of course, tremendously successful.*

By this stage the TMS was sufficiently established to provoke the debating society, the Magpie and Stump. Founded more than fifty years previously in 1866, it feigned umbrage at the upstart TMS and challenged it to a silly race. This was to be a hoop-bowling contest from the north end of Tibb’s Row to half way between the pro-ante-penultimate and ante-penultimate E in Magdalene Street. Milne, who relished the cut and thrust of repartee, had joined the Magpie

<sup>4</sup> Letter from EA Milne to SA Milne, 9 November 1919, Milne papers, Bodleian Library

and Stump and spoken at its witty, light hearted debates. Clearly this lark put him and others like him, who belonged to both societies, into an impossible position, probably deliberately, and prompted an outpouring of passionate mock-serious argument and hot air. Milne enjoyed the jape and wrote home that it was up to the TMS “to assert its dignity and prestige and in some way to tweak the nose of the Magpie and Stump.”<sup>5</sup> Sadly history does not record whether the race ever happened.

TMS meetings generally focused on an aspect of mathematics but on 21 January 1920 Rouse Ball broke the mould with an entertaining talk on “Indigenous Japanese Mathematics” illustrated with pictures. He attracted an audience of thirty, as did Milne on 28 April 1920 speaking about “Vectors and Tensors”. (Chapman had persuaded Milne of the usefulness of vectors to tackle problems in mechanics, and Milne’s textbook “Vectorial Mechanics” appeared in 1944.) He wrote<sup>6</sup> to his father

*I had quite a crowded house for my paper on Wednesday – my rooms, where it was held, were quite full. Eddington turned up and took part in the discussion, also Darwin and Fowler.*

The little group of members, the nucleus of the TMS, was strengthened by shared interests and friendships. At Portsmouth Dean, Fowler, Pollard and Milne were war-time colleagues – and soon Fowler and Milne would plunge into astrophysics. Milne wrote a paper with Pollard on errors in sound trumpets, and with Chapman on Earth’s upper atmosphere. Hardy regularly invited Darwin, Fowler and Milne to play ‘vint’ (an elaborate Russian form of bridge) at which Hardy excelled. In June 1920 Darwin, Dean, Milne and Roseveare chased about Borrowdale on the Lake Hunt.

During these early months of the TMS, Hardy, who made “mathematics shine”<sup>7</sup> in Milne’s words, was under a cloud. His discomfort was due to his pacifism and his effort to re-instate Bertrand Russell, whose dismissal from his college lectureship in 1916 had caused a stir. In 1920 Hardy seized the chance to retreat to a chair at Oxford, returning in 1931 to Cambridge’s Sadleirian chair.

What of the vital subcommittee? In brief, Dean held a chair at University College London; Sir Edward Collingwood was President of the London

5 Letter from EA Milne to E Milne, 23 November 1919, Milne papers, Bodleian Library

6 Letter from EA Milne to SA Milne, 30 April 1920, Milne papers, Bodleian Library

7 Milne, EA., Obituary of GH Hardy in *Monthly Notices of the Royal Astronomical Society* **108** 1948 pp. 44–46



E A Milne, 1917.



G H Hardy.

Mathematical Society and held the office of High Sheriff of Northumberland; Roseveare became a schoolmaster and rose to be Head of Cheltenham College then Gordonstoun School.

My father was the first to hold the new Oxford chair endowed by Rouse Ball (Littlewood occupied the Cambridge one), and was President of the London Mathematical Society and the Royal Astronomical Society. Ever eager to encourage students, he would be thrilled that the TMS has reached a landmark birthday with a huge membership and an extensive programme of events. Long may it flourish.

Acknowledgement. My grateful thanks to Miranda and Horace Barlow

February 2019

**By Meg Weston-Smith**

Author, *Beating the Odds: the Life and Times of EA Milne* Imperial College Press, 2013



John Bradfield.

## Bradfield the Builder by Boyd Hilton (1974)

John Bradfield is remembered for his consummate financial skills but less well known are his attempts to shape Trinity's architectural heritage. He had a passion to extend the College's

premises, partly for the rents that residential sets and attached commercial premises brought in, but also because he was a born developer for whom bricks and mortar spelled progress and achievement. And because he loved to build cheaply as well as bigly he was often caricatured as a Philistine, as many bursars often are, but the charge is not entirely just since he seems to have held fairly consistent preferences with regard to design.

That this has not been recognised is probably due to the development with which he was most particularly associated, Angel Court, which was constructed during 1957–59 under the direction of a consulting engineer H.C. Husband, designer of the Radio Observatory at Jodrell Bank. Sadly, Angel Court is nothing like as visually exciting as the Lovell Telescope and it quickly came under the critics' lash. Nikolaus Pevsner tut-tutted mildly against what he saw as 'a demonstration against the sense of adventure which other colleges began to show at just that moment', but his pupil Nicholas Taylor was more typical in denouncing it as 'municipal ... a monument of subtopian banality'.<sup>1</sup> Nowadays one might regret the failure to exploit the tiny vernacular courts and alleyways that surrounded the old Angel Inn, while on the other hand feeling grateful for Cambridge's first exercise in facadism, meaning the way in which the new residential accommodation was hidden behind a retained (though slightly more regimented) street elevation. For the record it was also an ingenious piece of engineering, while its tight arrangement of thirty-nine residential rooms along a series of corridors proved highly efficient, even if purists regretted the abandonment of the staircase model.

<sup>1</sup> Nikolaus Pevsner, *Buildings of England: Cambridgeshire* (2nd edn, 1970), p. 177; Nicholas Taylor and Philip Booth, *Cambridge New Architecture* (3rd edn, 1970), p. 49.

In bringing Angel Court to fruition Bradfield and Husband did not fly entirely solo, but the small Trinity Street Committee took a very secondary role while the Fellowship at large was only consulted after the proposal had been worked almost to a *fait accompli*. Bradfield had admired Husband's structural repairs to the Master's Lodge some eight years earlier, and it was he who now insisted on appointing him rather than a conventional firm of architects. Bradfield must therefore take a large part of the blame for Angel Court's somewhat amorphous appearance, but as a guide to his aesthetic tastes the project is misleading. Much more significant in this respect was his passionate support for Powell & Moya's uncompromisingly modernist and far from amorphous scheme for a residential building on the Brewhouse site.<sup>2</sup> That proposal had been carried at a College Meeting in 1955 but the majority (27–24) was too narrow for it to go ahead. It was designed as a plain four-storey block with clean lines in stone and good facing brick, and it would if built have been the first of those architects' many Oxbridge projects, though less mannered (and far less expensive) than their later masterwork at St John's. Even in late old age Bradfield often expressed regret at the missed opportunity on the Brewhouse.

Independent of Bradfield's itch to build, there was a widely recognised need for many more residential sets. Government was putting pressure on universities to expand, while an inrush of candidates from grammar schools, many of which had no close connections to colleges, was creating increased competition for students. It was therefore worrying that 43 per cent. of Trinity's junior members were forced to live in lodgings or digs, a comparatively high figure among colleges as a whole and much worse than St John's where the equivalent figure was less than 10 per cent. Some Fellows remained committed to building on the Brewhouse and others rooted for Burrell's Field beyond the Fellows' Garden, but even while Angel Court was under construction Bradfield was focusing on a large rectangular area bounded by Whewell's Court, Trinity Street, Green Street, and Sidney Street. Its most prominent internal feature was the Blue Boar Hotel, a famous old coaching house which extended eastward from about the middle of Trinity Street. The street elevations made for a respectable townscape, but the interior was a 'squalid and amorphous' muddle of hotel, warehouses, workshops, and yards. Trinity owned a good deal of the site including the hotel, and Bradfield was making piecemeal moves to acquire the remainder, when a stretch of land from Trinity to Sidney Street and adjacent to Whewell's Court

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<sup>2</sup> Powell & Moya were celebrated for their Skylon Installation at the Festival of Britain (1951).

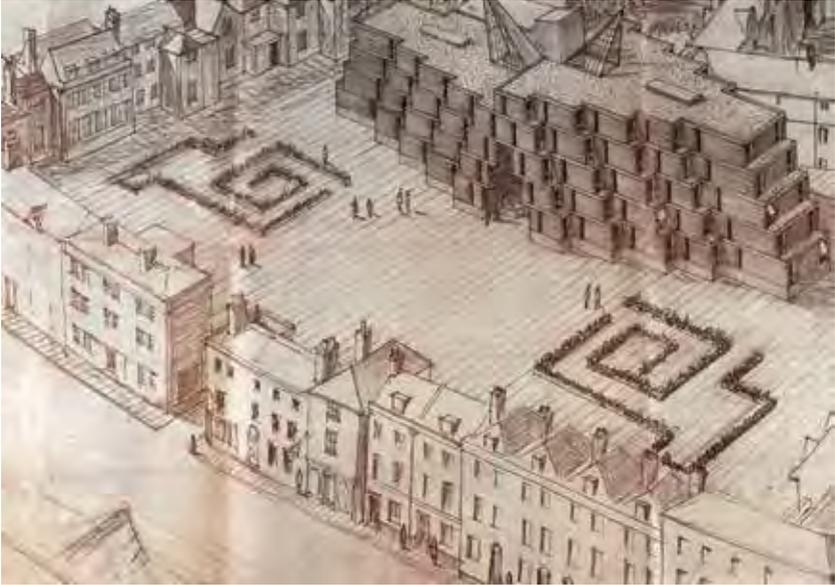
suddenly became available in 1964, causing him to pounce at once. His first and most radical suggestion was for two levels of underground car-parking accessed from ramps in Trinity and Green Streets, with new buildings along Trinity Street, shops below and bedsits above, and with a small ground-floor court behind. The City Council could hardly have objected to such wholesale destruction given that it was planning to tear down one whole side of Petty Cury in order to erect Lion Yard. On the other hand, there would be public opposition, and the planners might well have insisted on setting the new buildings back from the existing street line. His Plan B was therefore to retain and build behind the Trinity Street facades, as had been done across the road, but with this difference, that a podium would be built at first floor level right through as far as Sidney Street, with residential accommodation rising from it and with ground level-shops and a basement car park beneath.

In February 1965 an Architect Selection Committee proposed that Fitzroy Robinson and Architects' Co-Partnership (ACP) should be offered £1,000 to produce 'sketch plans in some detail'. The first was a commercially-oriented firm, while ACP was led by the cutting-edge modernist designers Kenneth Capon and Michael Powers, famous for 'brutalist' university buildings such as the campus at Essex and Dunelm House in Durham.<sup>3</sup> Two months later the secretary of the Selection Committee reported somewhat mysteriously to Council that 'there would almost certainly be professional objections to the procedure recommended by the committee', the problem being apparently to do with consulting several architects simultaneously. He went on: 'the urgent need to begin the development ... has persuaded [the Selection Committee] to agree to a suggestion made by the Senior Bursar that they should now recommend that instead of asking two firms of architects ..., one architect only, Mr Capon of ACP, should be asked to do this.'<sup>4</sup> Were these 'trade union difficulties' real or made up? Either way, the alacrity with which Bradfield narrowed the field is evident, while the word 'persuaded' suggests that his fellow committee members had been reluctant to acquiesce. His motivation is likely to have been aesthetic in part, since he seems to have been genuinely excited by Essex University's residential towers, but it was also tactical. Council had already decided that a large standing body called the Development Plan Committee (DPC) would be responsible

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3 Interim report, Council Report Book [CRB], 12 February 1965, f. 41. ACP had almost certainly been recommended by Sir Leslie Martin, Fitzroy Robinson perhaps by the College agents Bidwells. I am grateful to Nicholas Ray for advice on this and other matters.

4 Robert Robson to Council, CRB, 23 April 1965, f. 46.



Bradfield's vision of how the Wolfson Building would dominate its court once the podium had been extended as far as Green Street. Photo by James Kirwan.

for formulating a scheme. The problem with architectural competitions from Bradfield's point of view was that, by being allowed to compare rival proposals, the other committee members might develop ideas of their own. His preferred *modus operandi* remained that which he had employed in the Angel Court project: to ensure that biddable architectural consultants were chosen and then work on them – in this case Capon and Powers – to produce a scheme that Bradfield himself approved. After that his task would merely be to persuade – first the DPC, then the Council, and finally a College Meeting of all Fellows.

Viewed from above the Wolfson Building resembles a six-storey diamond with blunt ends. Each floor tapers both in plan and elevation as it rises and narrows towards two prominent beak-shaped skylights alongside an ugly-on-purpose lead water tank. It can loosely be described as a ziggurat. First the DPC, then the Council, and finally the Fellows at large were informed that this was a modification of ACPs initial proposal which had had to be scaled down on cost grounds, but this left a very great deal unsaid. ACP had originally proposed two identical semi-ziggurats aligned in an east-west direction with their backwards-staggering inner walls facing each other about twenty yards apart. After Bradfield had objected to

the extra cost of two lift shafts, ACP designed a free-standing lift between the two buildings and connected to each by a glass link, but Bradfield thought this still too extravagant. Fortunately for him, the structural engineer then ‘got cold feet [about] the expense of making [the two towers] stand up’, and so it was decided to make them ‘lean against each other by joining them at the top’.<sup>5</sup> This explains why the Wolfson Building has triangular cavernous upside-down clefts on each of its north and south faces.<sup>6</sup> (Incidentally, Bradfield was on strong ground in urging economies because the whole venture depended on the success of a public appeal. Indeed, it was a grant of £200,000 from the Wolfson Foundation that led to its being named as it was.) However, he was not responsible for a second rebuff to the architects, whose original design had featured vertically ribbed exposed aggregate. It was the DPC which insisted on a softer and less brutal light-coloured brick after visiting and recoiling from the Essex prototypes. There is evidence that Bradfield regretted the substitution, though characteristically he accepted it as a means to secure swift agreement.

A College Meeting approved the proposals unanimously, as did the City Planners with whom Bradfield had been working very closely. There was, however, a fierce broadside from the Royal Fine Arts Commission (RFAC), which objected to the ‘monumental’ bulk of the proposed building as well as to ‘its radical departure from the existing pattern of linked open spaces, surrounded by living accommodation’. If it went ahead ‘it would be greatly regretted by future generations and not least by the College itself’.<sup>7</sup> The Master lobbied ministers to no avail, even though he was Lord. Butler. More effectively, Bradfield harried the RFAC with three separate versions of his most powerful negotiating weapon: the *memorandum*. A gale-force Bradfield memorandum would typically launch a highly explosive message, mixing shrewd ratiocination and ingenious debating-points, but encased in a shell of grotesquely over-detailed and repetitive persiflage that went on for ever and was quite obviously designed to destroy an antagonist’s will to live.<sup>8</sup> It is impossible to outline here the rhetorical devices

5 Bradfield, note, 8 December 1965, DPC Papers, Muniment Room, E.III.1.

6 Or, rather, it ‘had’ upside-down clefts. These were partially filled in with ‘hanging’ glass seminar rooms by 5th Studio Architects in a successful major refurbishment of 2006. It has had the happy effect of humanising those elevations, but it means that an imaginative effort is now needed to appreciate the rugged brutality of the original.

7 Godfrey Samuel (RFAC) to Bradfield, CRB, 30 December 1966, f. 30.

8 Bradfield, ‘Matthew’s site development’, CRB, 3 February 1967, f. 7; Bradfield, ‘Note for the RFAC’, 6 December 1966, ‘Note for the Cambridge City Planning Committee’, 26 January 1967, and ‘Report on planning permission negotiations’, 11 May 1967, all in CRB, 19 May 1967, ff. 30–1.



This image shows how Architects' Co-Partnership intended the Wolfson to be finished in vertically ribbed exposed aggregate. They regretted that the College's decision to encase the concrete with horizontal bands of light-coloured brickwork had turned their 'soaring monolith into something more like a pile of boxes staggered one on top of another' (see p.147).

that he brought to bear in defence of the Wolfson Building plans, but one point needs stressing. The City Planning Committee had approved the ACP proposals, but only on condition that, if Trinity were ever to demolish the Blue Boar Hotel and extend the podium southward as far as the backs of the Green Street houses, *it must not in any circumstances build anywhere above the podium*. Bradfield not only solemnly promised this on Trinity's behalf, but even made a virtue of the condition in order to counter the RFAC's objection that the Wolfson Building as designed would look awkward and obtrusive. In a memorable document he conceded that this might be true in the short term, but promised that eventually a generous court-like effect could be created by extending the podium to the perimeter buildings fronting on to the three surrounding streets. Then, thanks to the prohibition on any building above podium level to interrupt the view, the new residential block would stand in symmetrical splendour 'on the north side of a spacious first floor court stretching away to the south of it'. Then by way of a

clinger he added: ‘This concept of a dominant building in an enclosure also has a respectable architectural history, with examples including St Mark’s in Venice and scores of urban enclosures in Italy and other countries.’<sup>9</sup> The comment was accompanied by ACP’s long-distance perspective of the Wolfson Building from across an imagined podium (see image on p.144). However, the comparison with the *Basilica San Marco* was left to the imagination.

A back-handed compliment to the Wolfson Building would be that, except for a tiny gap on Sidney Street used by delivery vans, it is invisible from the surrounding streets, so that it often occasions wonderment in wayfarers who come across it for the first time. Simon Bradley in the revised edition of Pevsner’s *Cambridgeshire* describes it as ‘iconoclastic ... a startling instance of building-as-sculpture, without post-war parallel in central Cambridge.’<sup>10</sup> At the time of completion most of the architectural press sought to be kind to a firm of highly respected architects but seemed puzzled. Peter Davey, for example, described the building as overpowering and alien, ‘a new pale whale, stranded by the economic tide in a pool full of delicate aged creatures’. One published appraisal is worth quoting at length since it came from the architects themselves. Invited to comment on their own handiwork by *Building* magazine, they not only gave it low marks but held the finished result at a distance by referring to themselves in the third person. They began by acknowledging that the RFAC and other bodies had strongly opposed their design all along, and it was only thanks to a ‘determined client’ that opposition was overcome.

However, client determination has [also] led to certain design compromises that the architects would rather not have had to make. The most dramatic involved the external wall treatment. The building was designed as a basically monolithic concrete faced structure with the strong vertical characteristic of a knocked off rib face. The finished building with brick panels between precast concrete ‘string courses’ at every floor level giving a dominant horizontal emphasis has changed the original conception of a soaring monolith into something more like a pile of boxes staggered one on top of another.

ACP seem never to have met such obduracy before, nor such attention to detail. They did not mention the fact that their original twin buildings had early on

9 Bradfield, ‘Report on planning permission negotiations’, CRB, 19 May 1967, f. 30.

10 Simon Bradley and Nikolaus Pevsner, *Buildings of England: Cambridgeshire* (revised edition, New Haven and London, 2014), pp. 232–3.

been squashed into a single monolith, but they did allude to their loss of control in more general terms.

The project has provided an interesting adventure in client/architect relationship, and although the architect has lost out on certain vital issues – vital to him that is – nevertheless the relationship is still a friendly one. The unusually devoted attention to detail and to contract administration by the client, though it has taken time – 2 or 3 site visits a week at one period by the job architect – has probably helped to save from capsizing what proved to be a very difficult contract to administer.<sup>11</sup>

Bradfield's memorial brass has not yet been composed but *conductoris pervicacia* (roughly 'client determination') would sum him up very well.

By the time that the Wolfson Building's 92 bedsits came on stream in 1971, attention had turned to Burrell's Field. The original idea, pushed strongly by Bradfield, was for a development containing 200 residential sets, 20 flats for married students, and a common room. Three distinctly 'modernist' firms were invited to compete: ACP, local boy David Roberts, and Trevor Dannatt. The last two proposed mainly low-rise buildings grouped around small courts, Roberts' scheme being favoured unanimously because his courts had open corners and linking cloisters, thus 'providing something of the intimate and domestic character of college courts while retaining the park-like quality of the site'. The outlier was ACP's submission, which was for three load-bearing brick structures, each rising about as high as the top of the tower of the University Library. Given the incongruity of the site, this might have been thought to be a spoof, except that ACP had proposed something similar for the meadow opposite King's College Chapel. Likewise, their rationale for erecting 48-metre high buildings – 'to make them a clearly identifiable satellite to the main body of the College, intentionally visible from the College, thereby encouraging a sense of identity between the old area and the new' – might have been thought facetious had ACP not boasted earlier about making the Wolfson Building's beaky skylights 'purposely just visible from the west side of Great Court'. Spoof or not, the DPC's report gave every appearance of taking ACP's 'striking and dramatic' design perfectly seriously.

<sup>11</sup> Report on the Wolfson Building by Architects Co-Partnership, *Building* (24 October 1975), 63–70.

Its clean and elegant lines would doubtless in the view of many enhance the Cambridge skyline, though others would consider that it was not desirable to introduce such tall blocks in this part of Cambridge.... We do not criticize on aesthetic grounds but think they would make for uncongenial living, as in the comparable towers at Essex University.

The most likely explanation of this statement is that a majority on the DPC wanted nothing to do with the triple towers, but that it was persuaded by Bradfield not even to hint at criticism of an aesthetic idiom with which he himself was much in sympathy. His hand is also evident in the DPC's main reason for finally rejecting the ACP proposal, which was not uncongenial living but the cost of so many lift shafts, especially as the architects had included two in each tower.<sup>12</sup> Given their experience on the Wolfson Building this showed some temerity on ACP's part, but at least Bradfield did not suggest merging the towers together.<sup>13</sup> Finally, when the matter came to be decided by the Fellowship the voting was 42 for Roberts, 1 for ACP, and none for Dannatt, though in the event Roberts' original plan was scrapped in favour of his later design for Adrian and Butler Houses, which opened in 1978.

Anyway, it soon became clear that ACP remained Bradfield's go-to architects. In 1984, after Trust House Forte had indicated that it had no desire to renew its lease on the Blue Boar Hotel, Bradfield at once urged Council to pull it down and extend the podium southwards all the way to Green Street.<sup>14</sup> The shops beneath would be given greater depth while a residential court would be built on top. This was in blatant defiance of Bradfield's solemn undertaking fifteen years earlier not to build over the podium once it had been extended, and it may seem surprising that the planners did not hold Trinity to his word. But then again, perhaps not. The promise had been made on the presumption that people would wish to see the 'pale Wolfson whale' in all its glory, as through from the back of Piazza San Marco, whereas public taste having changed the desideratum now was not to set the Wolfson Building off but as far as possible to conceal it.

<sup>12</sup> 'Burrell's Field: architects' submissions and Committee report', CRB, 9 June 1967, f. 37.

<sup>13</sup> Thanks to a note by Alan Hodgkin it is known that, notwithstanding the DPC's unanimous recommendation, one member 'strongly supported' ACP. Unfortunately the Fellows' ballot was secret so we cannot know whether Bradfield broke ranks with the DPC and supported his favourite architects. DPC Papers, Muniment Room, E.II.24.

<sup>14</sup> The south-east quarter of the site had been acquired during the course of the Wolfson Building development, and the podium stretched out across it, with a *Sainsbury's* store beneath.

By this time I was myself a member both of the Council and the DPC – hence this slide into first person singular – and greatly looking forward to playing at being an architectural patron as we considered how to develop the Blue Boar site. I was therefore dismayed when Bradfield announced at our first meeting that there should not be a competition but that we must simply hand the job to ACP on the ground that, having designed the adjacent Wolfson Building, they ‘knew where the bodies were buried’, meaning drains and electrics. To compensate for the lack of competition we instructed the architects to put forward as feasibility studies at least ‘two schemes, with opportunity for the committee to discuss them at early sketch plan stage’.<sup>15</sup> Instead we were offered quite detailed plans and a model of just a single scheme, which the ACP architects claimed was not only the most desirable but *the only possible* solution. It did not escape our notice that this ‘solution’ was very like the one that Bradfield himself had from the beginning claimed was the obvious way forward. It consisted of an L-shaped block which hugged the insides of Matthew’s Lane and Gifford Place and rose three and four storeys above the podium. The planning of the rooms, staircases, and corridors was impressive. The style – quite different from the firm’s output back in the 1960s – was a neo-Tudor vernacular with staggered bays, variable roofline, gently pitched roofs, and prominent eaves – to my eyes somewhat *passé*. Nevertheless, all but two of the DPC’s nine members were ‘enthusiastic’. For me the biggest problem was that two sides of the new court would have consisted of the backs of Green Street and Trinity Street houses, all very jumbly, incoherent, and mean. Nevertheless, Bradfield drove the project hard, his eyes blazing with enthusiasm, but at a painful meeting of the DPC lasting from 5 pm to 11 pm with a short break for dinner, Ian Glynn and I persistently refused to sign the report. We were undoubtedly recalcitrant but otherwise deplorably weak. We told the others to go ahead, since a majority of 7–2 would be quite enough to give the project a fair wind, and we undertook not to lobby against the plans. We simply did not want our own names to appear on the tin. As the hours ticked by, Bradfield used all his powers of thumbscrew polemic to make us change our minds on the grounds that without a unanimous vote the scheme must fall. He said there was the prospect of an outcry in the town against the closure of the famous coaching inn, but that locals were more likely to accept the proposal if the College was united behind it, and that the Fellowship was more likely to unite behind it if it knew that the DPC was unanimous. But Ian and I

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<sup>15</sup> Report of the DPC, 16 December 1983, DPC Papers, Bursary Archives.

would not budge, and on the following day, with much recrimination, Bradfield agreed to ask other architects to see if they could come up with a solution that might command the requisite unanimity.

In the cold light of morning it was obvious that Bradfield's arguments had been specious in the extreme. The Blue Boar was clapped out and cramped and there was no significant opposition in the town to its closure. If there had been it would not have been appeased by knowledge that the College was unanimously in favour. Nor would the Fellowship have swung behind it simply because the DPC was unanimous. I can only suppose that Bradfield himself had turned against the design – perhaps because it did not offer the clear modernist lines of ACP's Wolfson Building and unbuilt tower blocks – but, in order to spare his embarrassment with architects whom he had encouraged, he wanted to be able to blame the committee. Bradfield always played to win, and *in extremis* winning was more important to him than *seeming* to win.<sup>16</sup>

The onus being on us rebels to suggest another architect, Glynn suggested MacCormac, Jamieson, Prichard (MJP) whose Sainsbury Building he had been



Canaletto provided inspiration for Bradfield's vision of how the Wolfson Building would look across an extended podium.

<sup>16</sup> I remember my delight on one occasion when I bested Bradfield in an argument on the Council. I did not realise until thinking about it in bed later that he had wanted me to win all along.

much taken with on a recent visit to Worcester College, Oxford. I knew and loved that building and at once jumped behind the suggestion, wishing that I had thought of it myself. MJP demonstrated that an L-shaped building was not the only option on the Blue Boar site, since there was just sufficient space in which to fit a whole new court. Apart from anything else, it meant that the jumbly, incoherent, and mean backsides of the Trinity and Green Street houses, once cleaned and brushed up, became an asset instead of an eyesore, creating the sort of intimate enclosed spaces that characterise the interstices of many Cambridge blocks. Inside the court the residential accommodation rises mainly two storeys above the podium in a mixture of Ancaster and Clipsham stone with yellow brick, but there are turrets in the south and north-west corners and a tower over Gifford Place below, which gives vehicular access from Green Street to the basement. The Eiger-like hulk of the Wolfson Building is largely invisible, except where the new court opens out through a void in the north-east corner to greet the dramatic triangular cleft on the Wolfson's south face. Although there is nothing formally 'retro' or 'copyist' about the design of Blue Boar Court, it nevertheless resembles an Italian piazza, and the effect is compounded by a campanile-style structure at the east end.<sup>17</sup>

Given a choice, most members of the DPC had no doubt that Richard MacCormac's proposals should be accepted, but I could never be sure what Bradfield felt. He was happy with everything below the podium, with the efficiency of the operation, and with the substantial use of stone, but it is unlikely that he responded well to MacCormac's distinctive brand of modernism – 'romantic pragmatism', as it was often called – 'an intelligent hybrid of modernism combined with his deep knowledge of historical forms',<sup>18</sup> and owing more to Lloyd Wright than to Le Corbusier. He must also have been conscious of a loss of control, partly due to strong-willed architects and a more independent-minded committee but mainly due to the fact that possession of the purse strings no longer carried as much clout as formerly. Once upon a time he could have stymied MacCormac's lead-coated steel windows, large oriels, and bullseyes, but since 1970 he had repeatedly shot himself in the foot by making so much money that the Fellows no longer listened when he warned of 'the rainy days' that were a-gonna fall.

<sup>17</sup> This campanile marks the entrance to a shallow staircase that leads to a little cloister, and then on to the 150-seat Winstanley Lecture Theatre, designed à la Japonais by MJP but following structurally along the ingenious lines first worked out by ACP, whose lecture theatre would have been more streamlined and box-like.

<sup>18</sup> Charles Saumarez Smith, <https://www.royalacademy.org.uk/article/richard-maccormac-ra-remembered>



Tuscan Hill town comes to Cambridge.

There was only one more adventure, right at the end of Bradfield's period in office, when it was decided to build a large residential colony at Burrell's Field. Three architects were invited to compete and Richard MacCormac's design was chosen unanimously. There is not space to describe it here. Suffice it to quote Simon Bradley: 'To move through this sequence [of buildings and pathways], with the calculatedly narrow sight-lines hinting at rather than giving away the attractions to come, the ordering presence of the diagonals constantly but never predictably apparent, is the most intense spatial pleasure which late 20C architecture has to offer in Cambridge'.<sup>19</sup> But as with Blue Boar Court it is hard to say what Bradfield really thought. He must have relished its wonderful marriage of masonry and landscape and he certainly grumbled about costs (while adding to these by insisting that all WCs should have natural ventilation), but he was on the brink of retirement and remained comparatively passive. However, he did attempt one coup. The key element of the Burrell's Field development is the close juxtaposition of ten four- and five-storey towers, either standing alone or linked by low-rise building. On committee Bradfield waited for a moment when it would have been too late to abort the whole project but still *just* possible to incorporate a major design change. His bright idea was to save pots of money by making six of the twin towers come together in a shared staircase, thereby saving money. This suggestion, which would have totally destroyed the 'Tuscan hill town effect',<sup>20</sup> was dismissed out of hand, and to be honest it was only ever a half-hearted attempt, the last whelp of an old dog remembering his trick with the Wolfson Building.

<sup>19</sup> Bradley and Pevsner, *Cambridgeshire*, p. 340.

<sup>20</sup> MacCormac shamelessly deployed this dreadful *cliché* in order to sell his scheme to the College – yet that is just how it does appear when seen from across the Bin Brook.

The point of this essay has been to suggest that John Bradfield not only liked to build and build as economically as possible but that he also had strongly ‘modernist’ tastes in the sense that these were mainly understood during the third quarter of the twentieth century. The point seems worth making since such preferences hardly seem to fit with his deeply conservative political, social, and empire loyalist opinions and with his devotion to tradition. Yet perhaps the combination was not all that incongruous. He was a Cambridge grammar schoolboy of scientific bent and a ‘New Elizabethan’ by temperament. He had a talent for development in the national as well as Trinity interest, not just at Felixstowe docks and the Trimley industrial estate but in numerous other smaller ventures. He had only five good words to say about Harold Wilson, the Labour PM, but these were significant – ‘the white heat of technology’ – and were duly acknowledged when he came to explain the genesis of his scheme for the Cambridge Science Park.<sup>21</sup> In this light, perhaps it was natural that he should have shared in the utopian ideals of so many town planners with their street decks in the sky and their vehicular underpasses. (Indeed one of his great frustrations was his repeated inability to persuade his colleagues to build a pedestrian underpass beneath Queen’s Road and underground car parks beneath the South Paddock and Brewhouse.) Again, if Bradfield’s evident enthusiasm for ACP’s work at Essex University seems surprising, it is easy to forget that, before it became famous for left-wing political and sociological studies, Essex had been intended primarily as ‘a campus of 20,000 recruits for the officer class of C.P. Snow’s “Scientific Revolution” and Britain’s answer to MIT’. How this ethos affected the architecture at Essex was explained by Kenneth Capon: ‘The English love making things shaggy and softening everything up. We decided to do *something fierce* to let the students work within.’<sup>22</sup> Seen in this light the Wolfson Building and the plans for Burrell’s Heights make perfect sense. It also suggests that Bradfield’s gradual loss of influence in aesthetic matters might have had less to do with committee structures, a fat purse, strong-willed architects, and recalcitrant Fellows than with the whirligig of fashion, which waits for no bursar.

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21 ‘Sir John Bradfield in conversation with Linda Fairbrother’, *Trinity Annual Record*, 2014–15, p. 137.

22 <https://c20society.org.uk/2014/10/03/something-fierce-at-the-university-of-essex/>



FELLOWS, STAFF,  
& STUDENTS

THE MASTER AND FELLOWS  
APPOINTMENTS AND DISTINCTIONS  
IN MEMORIAM  
A NINETYETH BIRTHDAY SPEECH  
COLLEGE NOTES





## The Fellowship

### The Master and Fellows

October 2019

#### Master

(Appointed 2019) **Professor Dame Sally Davies** DBE, FRS, FMedSci

#### Fellows

Elected

- |      |   |  |
|------|---|--|
| 2019 |   | <b>Professor Dame Sally Davies DBE, FRS, FMedSci</b> <i>Master</i>               |
| 1993 | D | <b>Professor Grae Worster</b> Applied Mathematics. <i>Vice-Master</i>            |
| 1957 | E | <b>Professor John Davidson</b> Chemical Engineering. <i>Senior Fellow</i>        |
| 1957 | E | <b>Professor Amartya Sen</b> Welfare Economics. <i>Former Master (1998–2004)</i> |
| 2012 | E | <b>Lord Martin Rees of Ludlow</b> Cosmology. <i>Former Master (2004–2012)</i>    |
| 1991 | E | <b>Sir Gregory Winter</b> Molecular Biology. <i>Former Master (2012–2019)</i>    |
| 1958 | E | <b>Mr John Easterling</b> Classics   |
| 1958 | E | <b>Dr Andrew McLachlan</b> Molecular Biology                                     |
| 1960 | E | <b>Professor Ian Glynn</b> Physiology  |
| 1961 | E | <b>Dr Anil Seal</b> Indian History   |
| 1963 | E | <b>Dr Roger Dawe</b> Greek Literature  |
| 1964 | E | <b>Dr Neil Hamer</b> Chemistry   |

- 1964 E **Professor John Lonsdale** African History
- 1966 E **Dr Ronald Ferrari** Electrical Engineering
- 1966 E **Lord Julian Hunt of Chesterton** Applied Mathematics
- 1967 E **Dr Brian Mitchell** Economic History
- 1968 E **Dr Chris Morley** Engineering. *Secretary of Council*
- 1969 E **Professor Brian Josephson** Condensed Matter Physics
- 1970 E **Professor Bela Bollobás** Pure Mathematics
- 1971 E **Lord Garry Runciman** Sociology
- 1971 E **Professor Hugh Osborn** Theoretical Physics
- 1971 E **Professor John Hinch** Applied Mathematics. *Secretary of the Fellowship Electors*
- 1972 E **Dr Graham Chinner** Earth Sciences
- 1972 E **Professor Sir Michael Berridge** Cell Biology
- 1973 E **Professor Horace Barlow** Physiology
- 1973 E **Professor Philip Allott** International Public Law
- 1974 E **Dr Douglas Kennedy** Statistics
- 1974 E **Professor Boyd Hilton** Modern British History. *Secretary: Title B Committee*
- 1974 E **Professor Andrew Crawford** Physiology. *Steward*
- 1975 E **Professor Adrian Poole** English Literature. *Fellow for Communications. Acting Tutor*
- 1975 E **Dr Alan Weeds** Biochemistry
- 2019 E **Professor Simon Keynes** Anglo-Saxon History
- 1976 E **Professor John Rallison** Fluid Dynamics
- 1977 E **Professor Gilbert Lonzarich** Quantum Physics
- 1977 D **Professor Stephen Elliott** Chemical Physics
- 1978 E **Professor Alan Windle** Nanomaterials
- 1978 B **Professor John Marenbon** History of Philosophy. *Secretary to the Honorary Fellows Committee; Public Lectures Coordinator*

- 1979 E **Professor Hashem Pesaran** Financial Economics
- 1979 E **Dr Ian McDonald** Chemistry
- 1980 E **Professor Keith Moffatt** Applied Mathematics
- 1980 E **Dr Arthur Norman** Computer Science. *Emoluments Secretary.*
- 1981 E **Dr Ronald Nedderman** Fluid Dynamics
- 1981 D **Professor Pelham Wilson** Mathematics
- 1982 E **Professor Nicholas Postgate** Assyriology
- 1982 E **Professor Sir Michael Pepper** Semiconductors
- 1983 E **Professor Nick Kingsbury** Signal Processing
- 1983 C **Mr Nicholas Denyer** Ancient Greek Philosophy
- 1983 C **Dr Neil Hopkinson** Greek Literature
- 1984 E **Professor Christopher Lowe** Biotechnology
- 1985 C **Dr Mark Chinca** German
- 1986 E **Professor David McKitterick** Former Librarian
- 1986 E **Professor Malcolm Perry** Theoretical Physics
- 1986 E **Dr Stephen Satchell** Financial Economics
- 1987 E **Professor Robin Carrell** Haematology
- 1987 E **Dr Nigel Unwin** Molecular Biology
- 1989 E **Professor Roger Paulin** German
- 1989 E **Professor Piero Migliorato** Electrical Engineering
- 1990 C **Dr Hugh Hunt** Dynamics. *Praelector*
- 1990 C **Dr Paul Wingfield** Musicology. *Tutor*
- 1990 E **Professor Nicholas Shepherd-Barron** Pure Mathematics
- 1991 E **Professor David Khmel'nitskii** Condensed Matter Physics
- 1992 E **Dr Jeremy Fairbrother** *Former Senior Bursar; Senior Treasurer Student Union; Treasurer Field Club*
- 1992 E **Dr Mark Morris** Japanese Studies
- 1993 E **Professor Steven Ley** Organic Chemistry

- 1993 E **Mr Paul Simm** *Former Junior Bursar, Keeper of the College Pictures, Secretary of the Wine Committee*
- 1993 E **Professor Kevin Gray** Comparative Law
- 2018 E **Professor Roger Keynes** Physiology
- 1994 D **Professor Sir Shankar Balasubramanian** Chemistry
- 1994 C **Dr Jean Khalfa** French. *Fellow for International Programmes*
- 1994 D **Professor Valerie Gibson** Particle Physics
- 1995 D **Professor Sir Timothy Gowers** Pure Mathematics
- 1995 D **Professor Simon Baron-Cohen** Experimental Psychology
- 1996 D **Professor Catherine Barnard** European Law; Employment Law. *Senior Tutor*
- 1996 C **Dr Richard Serjeantson** Early Modern History. *Tutor for Advanced Students*
- 1997 E **Professor Colin Hughes** Pathology
- 1997 D **Professor John Lister** Applied Mathematics. *Secretary: Expenditure Committee*
- 1997 C **Professor Sachiko Kusukawa** Early Modern Science. *Dean of College*
- 1997 C **Professor Tessa Webber** Palaeography
- 1998 C **Dr Rupert Gatti** Game Theory
- 1998 C **Professor Emma Widdis** Russian
- 1998 E **Dr Susan Daruvala** Chinese Studies
- 1998 C **Ms Erica Segre** Spanish
- 1999 D **Professor Lynn Gladden** Microstructure
- 1999 C **Ms Jo Miles** Family Law
- 2000 C **Professor Peter Sarris** Medieval History
- 2000 D **Professor Ali Alavi** Theoretical Chemistry
- 2000 D **Professor Imre Leader** Pure Mathematics. *Admissions Tutor (Maths & Sciences)*
- 2000 D **Professor Marian Holness** Petrology

- 2000 C **Dr Alyce Mahon** Modern Art
- 2001 E **Professor Simon Blackburn** Ethics; Epistemology
- 2001 C **Professor Joan Lasenby** Signal Processing
- 2001 E **Professor Douglas Fearon** Immunology
- 2001 D **Professor Richard Hunter** Greek
- 2001 C **Dr Anne Toner** English Literature
- 2001 D **Professor Gabriel Paternain** Pure Mathematics
- 2002 E **Professor Gary Gibbons** Theoretical Physics
- 2002 C **Dr Tom Fisher** Pure Mathematics
- 2002 D **Professor Rebecca Fitzgerald** Physiology. *Fellow for Trinity Women*
- 2002 C **Dr Sean Holden** Artificial Intelligence
- 2003 C **Dr Louise Merrett** Commercial Law. *Admissions Tutor (Arts & Humanities)*
- 2004 C **Dr Glen Rangwala** Politics. *Director of Admissions*
- 2005 D **Professor Judith Driscoll** Device Materials
- 2005 C **Dr Michael Tehranchi** Statistics
- 2006 C **The Reverend Dr Michael Banner** Religious Ethics. *Dean of Chapel; Chair of Alumni Relations and Development*
- 2006 C **Mr Rory Landman** *Senior Bursar*
- 2006 B **Dr Jeremy Butterfield** Philosophy of Physics (30/09/2021)
- 2006 E **Professor Philip Hardie** Latin and Neo-Latin Literature
- 2006 C **Mr Stephen Layton** *Director of Music.*
- 2006 D **Professor Matthew Juniper** Aerodynamics
- 2006 E **Dr Rod Pullen** *Former Junior Bursar*
- 2006 B **Professor Angela Leighton** Poetry (30/09/2021)
- 2006 D **Professor Nicholas Thomas** Historical Anthropology
- 2007 C **Professor Joya Chatterji** South Asian History

- 2007 C **Professor Malte Grosche** Condensed Matter Physics
- 2007 D **Professor Harvey Reall** Theoretical Physics
- 2007 D **Professor Zoran Hadzibabic** Atomic Physics
- 2007 D **Professor David Spring** Organic Chemistry. *Tutor for Advanced Students*
- 2007 D **Professor Jason Chin** Biochemistry
- 2008 E **Dr David Washbrook** South Asian History
- 2008 C **Dr Stuart Haigh** Geotechnical Engineering. *Tutor*
- 2009 D **Professor David Tong** Theoretical Physics
- 2011 C **Dr John Rudge** Applied Mathematics
- 2011 D **Professor Huw Price** Philosophy of Physics
- 2011 B **Dr Heonik Kwon** Social Anthropology
- 2011 D **Professor Sarah Worthington** Commercial Law
- 2011 C **Dr Cameron Petrie** Middle Eastern Archaeology
- 2011 D **Professor Oliver Linton** Econometric Theory
- 2012 D **Professor Patrick Maxwell** Clinical Medicine
- 2012 C **Dr Adam Boies** Energy Engineering. *Tutor*
- 2013 D **Professor Didier Queloz** Exoplanets
- 2013 D **Professor Joel Robbins** Social Anthropology
- 2013 C **Professor Eric Lauga** Fluid Dynamics. *Tutor*
- 2013 C **Dr David Skinner** Theoretical Physics
- 2013 C **Dr Tiago Cavalcanti** Macroeconomics
- 2014 C **Dr Henry Wilton** Pure Mathematics
- 2014 C **Dr Claudio Castelnovo** Condensed Matter Physics
- 2014 A **Dr Sean Curran** Medieval Music
- 2015 C **Dr Nicolas Bell** Librarian. *Tutor*
- 2015 C **Professor Frank Stajano** Computer Security
- 2015 C **Professor Cate Ducati** Nanomaterials. *Tutor*

- 2015 C **Dr Debopam Bhattacharya** Microeconomics
- 2015 C **Professor Jason Miller** Statistics
- 2016 D **Professor Mickey Adolphson** Japanese Studies
- 2016 B **Professor Michael Cates** Soft Matter Physics
- 2016 B **Professor Gregory Hannon** Oncology
- 2016 C **Dr Andrew Sederman** Magnetic Resonance
- 2016 C **Dr Catherine Aiken** Obstetrics and Gynaecology
- 2016 C **Dr Milka Sarris** Cell Biology
- 2016 C **Professor Per Ola Kristensson** Interactive Systems
- 2016 C **Dr Benjamin Spagnolo** Public Law
- 2016 A **Dr Clare Walker Gore** Victorian Literature
- 2016 A **Dr Edgar Engel** Condensed Matter Physics
- 2016 A **Dr Aaron Kachuck** Latin and Neo-Latin Literature
- 2016 A **Dr Gunnar Peng** Applied Mathematics
- 2016 A **Dr Beñat Gurrutxaga Lerma** Material Physics
- 2016 A **Dr Duncan Hardy** Medieval History
- 2016 A **Dr Jessica Fintzen** Pure Mathematics
- 2017 C **Dr Richard Hayward** Cellular Microbiology
- 2017 A **Dr Erik Clark** Development and Evolution
- 2017 A **Dr Hannah Stern** Physics
- 2017 A **Dr Katarzyna Kowal** Applied Mathematics
- 2017 A **Dr Alex Kendall** Engineering
- 2017 A **Dr George Roberts** History
- 2017 A **Dr Thomas Hutchcroft** Pure Mathematics
- 2017 A **Dr Partha Shil** History
- 2017 A **Dr Kirsten Macfarlane** Intellectual History
- 2018 C **Dr Anna-Maria Hartmann** English
- 2018 C **Professor Ewa Paluch** Medical Sciences

2018	A	<b>Dr Rohit Chikkaraddy</b>	Physics
2018	A	<b>Dr Jose Martinez</b>	Politics
2018	A	<b>Dr Jessica Lightfoot</b>	Classics
2018	A	<b>Dr Aled Walker</b>	Pure Mathematics
2018	A	<b>Dr Hannah Shepherd</b>	History
2018	A	<b>Dr Adi Steif</b>	Genome Science and Technology
2018	A	<b>Dr Jitka Stollova</b>	Literature
2018	A	<b>Dr Ewain Gwynne</b>	Pure Mathematics
2018	C	<b>Professor Samita Sen</b>	History
2019	C	<b>Mr Edward Knapp</b>	<i>Junior Bursar</i>
2019	C	<b>Dr Neel Krishnaswami</b>	Computer Science
2019	C	<b>Dr Marta Zlatic</b>	Zoology
2019	B	<b>Dr John Sutherland</b>	Chemistry
2019	B	<b>Professor Caucher Birkar</b>	Pure Mathematics
2019	C	<b>Dr Matthew McCullough</b>	Mathematics
2019	C	<b>Dr Aleks Reinhardt</b>	Chemistry
2019	A	<b>Dr Carys Brown</b>	History
2019	A	<b>Dr Auriol Rae</b>	Earth Sciences
2019	A	<b>Dr Allison Neal</b>	English Literature
2019	A	<b>Dr Luca Zenobi</b>	History
2019	A	<b>Mr Aleksander Doan</b>	Pure Mathematics
2019	A	<b>Dr Bingqing Cheng</b>	Computational Chemistry
2019	A	<b>Dr Jesse Liu</b>	Physics
2019	A	<b>Mr Alexandros Eskenazis</b>	Pure Mathematics

## Titles under which Fellowships are held:

- A Junior Research Fellows** are elected in an open competition normally decided at the start of each calendar year. Their Fellowships are normally tenable for four years.
- B Senior Research Fellows** are established scholars capable of 'contributions of high value' to their subject. Tenable for five years, a Senior Research Fellowship may be extended for further periods of five years, as long as the holder is actively engaged in research.
- C** Appointment to a **Qualifying College Office** confers eligibility to hold a Fellowship under Title C. College officers include College Lecturers, the Dean of Chapel, the Bursars, and the Librarian.
- D** Eligibility for these **Professorial Fellowships** is restricted to those who hold a University Professorship or a University office of similar standing (e.g. Registry, University Librarian). Some Professors, previously Fellows under Title C, choose to retain their College Lectureships on being promoted to Professor, and remain members of the College teaching staff as College Senior Lecturers, as is indicated in the list above.
- E** These are **retired Fellows** who, to qualify, must first have served as a Fellow under Title B, C, or D for a specified number of years. Anyone who qualifies for a Fellowship under Title E is entitled to hold it for life.
- F** These are **Visiting Fellowships** awarded only to those who are not normally resident in Cambridge; are primarily concerned with the furtherance of education, learning, or research; and are here for a period of not more than two years.

## Honorary Fellows

- 1977 **H.R.H. Philip Duke of Edinburgh**
- 1988 **H.R.H. Charles Prince of Wales**
- 1989 **Professor Freeman Dyson**
- 1989 **Rt Hon Lord James Mackay of Clashfern**
- 1991 **Professor Sir John Elliott**
- 1991 **Professor Walter Gilbert**

- 1999 **Professor Lord Alec Broers**
- 1999 **Dame Marilyn Strathern**
- 2000 **Professor Jeffrey Goldstone**
- 2000 **Professor Ian Hacking**
- 2003 **Sir Antony Gormley**
- 2004 **Professor Sir Richard Friend**
- 2005 **Professor Jared Diamond**
- 2005 **Judge Stephen Schwebel**
- 2006 **Rt Hon Lord Robert Walker of Gestingthorpe**
- 2007 **Professor Sir Peter Lachmann**
- 2009 **Dr Peter Goddard**
- 2009 **Judge Hisashi Owada**
- 2010 **Professor Sir Partha Dasgupta**
- 2011 **Sir Noel Malcolm**
- 2011 **Sir Andrew Wiles**
- 2013 **Rt Hon Lord Robert Carnwath of Notting Hill**
- 2013 **Professor Michael Klein**
- 2014 **Reverend Canon John Polkinghorne**
- 2014 **Dr Stuart Parkin**
- 2014 **Professor Sir Mark Pepys**
- 2015 **Professor Christopher Garrett**
- 2015 **Professor Anthony Grafton**
- 2015 **The Most Revd and Right Hon Justin Welby**
- 2016 **Professor Bryan Birch**
- 2016 **Professor Roy Kerr**
- 2016 **Professor Daan Frenkel**
- 2017 **Professor Stephen Toope**
- 2017 **Rt Rev Richard Chartres**

- 2017 **Professor Tony Cheetham**
- 2017 **Mr Anand Panyarachun**
- 2017 **Dr Martin Rudwick**
- 2018 **Professor Simon Schaffer**
- 2019 **Dr Venki Ramakrishnan**
- 2019 **Professor Dominic Lieven**

### **Regius Professors on the Foundation**

- 2012 **Professor Geoffrey Khan** Hebrew

### **Whewell Professor of International Law**

- 2016 **Prof Eyal Benvenisti**

### **Fellow Commoner in Creative Arts (FCCA)**

**Ms Ali Smith** *Senior Fellow Commoner*

**Mr Guy Guneratne**

**Ms Judith Weir**

### **Lector**

- 2015 **Dr Felice Torrasi**

### **Past Fellows with undertakings under Ordinance XIII.4**

- 2014 **Dr Alexander Gaunt**
- 2014 **Dr Ailsa Keating**
- 2014 **Dr James Kirby**
- 2015 **Dr Mireia Crispin Ortuzar**
- 2015 **Dr Alexander Freer**
- 2015 **Dr Tom Hamilton**

- 2015 **Dr Edouard Hannezo**
- 2015 **Dr Micha Lazarus**
- 2015 **Dr Richard Montgomery**
- 2015 **Dr Bernhard Salow**

### Temporary Lecturers

- 2019 **Dr Carlos Fonseca**
- 2019 **Dr Michal Kwasigroch**
- 2019 **Dr Gabriel Balmus**
- 2019 **Dr Dan Larsen**
- 2019 **Dr Damian Valdez**

### Privileges of Future Emeritus Fellows

- 2019 **Professor Sir David Baulcombe**
- 2019 **Professor Paul Brakefield**
- 2019 **Dr Venki Ramakrishnan**
- 2019 **Professor Dominic Lieven**



Lee Allison

## Appointments and Distinctions

### Cambridge University Promotions

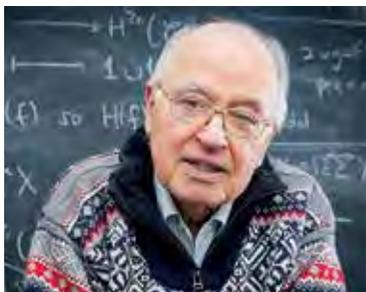
- 2015 **C. Ducati**, Professor, University of Cambridge.
- 2016 **P.O. Kristensson**, Professor, University of Cambridge.
- 2015 **J.P. Miller**, Professor, University of Cambridge.
- 2000 **P. Sarris**, Professor of Late Antique, Medieval and Byzantine Studies, University of Cambridge.
- 2016 **A. Sederman**, Reader in Chemical Engineering, University of Cambridge.
- 2012 **P.P Varju**, Reader in Pure Mathematics, University of Cambridge.

### Academic Honours and Distinctions

- 1996 **C. Barnard**, Pilkington Teaching Prize, University of Cambridge; Honorary Professor, Universidad Carlos III, Madrid.
- 2011 **P. Brakefield**, Honorary Fellow, Royal Entomological Society.
- 2016 **M. Cates**, Foreign Member, National Academy of Engineering, USA.
- 2007 **J. Chatterji**, The Guardian, Research Impact University Award.
- 2017 **A. Cheatham**, Honorary Fellow, Singapore National Academy of Science; Foreign Fellow, Indian National Science Academy.
- 2014 **S. Curran**, Alfred Einstein Award 2018, American Musicological Society.
- 2005 **J. Driscoll**, Fellow, Royal Academy of Engineering; IOM3 Kroll Medal.
- 1977 **S. Elliott**, Visiting Professor, School of Chemistry, University of Southampton; Thousand Talents Professor, Beihang University, Beijing.
- 2018 **E. Gwynne**, Clay Research Fellowship.
- 2016 **D. Hardy**, Gladstone Prize, Royal Historical Society.
- 2012 **N.J.S. Hardy**, recognised by the Renaissance Society of America's The Phyllis Goodhart Gordan Book Prize 2019, Honorable Mention for *Criticism and Confession*, 2017.
- 2018 **A-M. Hartmann**, Roland H Bainton Prize for best monograph on early modern literature, Sixteenth Century Society, Yale University.

- 2000 **M.B. Holness**, Murchison Medal, Geological Society of London.
- 2017 **T. Hutchcroft**, Rollo Davidson Prize, University of Cambridge.
- 2016 **R.P. Kerr**, Fellow, Royal Society
- 1976 **S.D. Keynes**, Honorary Fellow, Darwin College.
- 2013 **E.J.M. Lauga**, Early Career Award, American Physical Society.
- 2017 **K. MacFarlane**, Associate Professor of Early Modern Christianities and Fellow, Keble College, University of Oxford.
- 2018 **J.C. Martinez**, American Political Science Association Award for Best Dissertation on Middle East and North Africa.
- 2018 **E. Paluch**, Laureate in Life Sciences, Blavatnik Award for Young Scientist of the Year; Member, European Molecular Biological Organisation (EMBO); Professor of Anatomy, University of Cambridge.
- 1982 **M. Pepper**, Isaac Newton Prize and Medal, Institute of Physics; Honorary D.Sc., University of Leeds.
- 2014 **M. Pepys**, McFadzean Distinguished Lecturer and McFadzean Visiting Professor, University of Hong Kong; Burt Glazard Memorial Lecturer, Brigham and Women's Hospital, Harvard University 2019
- 1986 **M.J. Perry**, Professor of Theoretical Physics, Queen Mary University of London.
- 1979 **M.H. Pesaran**, Distinguished Fellow, International Engineering and Technology Institute.
- 2011 **H. Price**, Board, Ada Lovelace Institute.
- 2012 **M. Rees**, Honorary Fellow, Robinson College.
- 1957 **A.K. Sen**, Bodley Medal, University of Oxford.
- 1999 **M. Strathern**, Honorary LLD, Harvard University; International Balzan Prize for Social Anthropology 2018.
- 2016 **S.J. Toope**, Honorary LLD, University of Bristol; Honorary LLD, Law Society of Canada; Fellow, Royal Society of Canada.
- 2014 **H.J.R. Wilton**, G. de B. Robinson Award 2019, Canadian Mathematical Society.
- 2012 **G.P. Winter**, (Joint) Nobel Prize for Chemistry.
- 2018 **L. Zenobi**, Achille e Laura Goriato Prize (for history of Venice), Pier Franco Bertazzini Prize (for history of Monza).

## In Memoriam



### Sir Michael Francis Atiyah OM FRS Hon. FREng (1929–2019)

One of the greatest British mathematicians since Isaac Newton.

The last time I met Michael Atiyah, who has died aged 89, was at Tate Modern in London; not the most likely place to run into probably Britain's greatest mathematician since Isaac Newton, but entirely consistent with his wide-ranging enthusiasm for his subject. It was June 2012, and I joined him and the flamboyant French mathematician Cédric Villani in a panel discussion: Mathematics, a Beautiful Elsewhere. The title says it all.

We have sulphuric acid to thank for Atiyah's decision to become a mathematician. Early in 1940, as Britain and France fought over his homeland of Lebanon, his parents sent him to Victoria college in Cairo. In a 1984 interview he said that while there he got very interested in chemistry, but eventually decided that making "sulphuric acid and all that sort of stuff" was not for him: "Lists of facts, just facts ..." From that time on, mathematics became his passion. "I never seriously considered doing anything else." Atiyah's work was to have a profound influence on today's mathematics.

Atiyah was a geometer, in the sense of visual thinking allied to abstract symbolism, a new attitude that swept through mathematics in the middle of the 20th century. You thought about it like geometry but wrote about it like algebra, and very esoteric algebra at that. His research divides into four main periods, to some extent overlapping – in the 1950s, algebraic geometry; in the 60s and early 70s, K-theory; the 60s to 80s, index theory; and the late 70s to mid-80s, gauge theory, where his ideas became extremely influential in quantum physics.

Algebraic geometry originally developed from a deep link between geometry and algebra promoted in the 1600s by René Descartes. Start with Euclid's plane and introduce coordinates – pairs of numbers describing the location of a point, much as latitude and longitude determine a point on the Earth's surface. Geometric properties of curves can then be described by algebraic equations, so questions in geometry can be tackled using algebra, and vice versa.

In the late 1800s and early 1900s, a new kid appeared on the mathematical block: topology, in which geometrical shapes can be deformed as if made of elastic. Classical features such as lengths and angles lose their meaning, and are replaced by concepts such as being connected, knotted, or having a hole like a doughnut.

Topology turned out to be fundamental to many areas of mathematics. Techniques were devised to associate with a topological space various “invariants”, which reveal when spaces can or cannot be deformed into each other.

One of the most powerful invariants, homology, was established by Emmy Noether, the greatest female mathematician of the late 1800s and early 1900s. She reinterpreted, in terms of abstract algebra, rudimentary methods for counting features such as the number of holes in a surface.

In effect, Noether explained that as well as counting holes and associated structures, we can ask how they combine, and extract topological information from the answer.

Atiyah began his research career in algebraic geometry, but under the influence of his supervisor, William Hodge, at Cambridge, he quickly moved into an adjacent field, differential geometry, which studies concepts such as curvature — how a space deviates from the flat plane of Euclid. There he made big advances in the interactions between algebraic geometry, differential geometry and topology.

Euclid’s investigations of a circle includes its tangents: straight lines that touch it at one point, like a road supporting a bicycle wheel. Similarly, a sphere has a family of tangent planes, one for each point on its surface. A general family of this kind is called a vector bundle: “bundle” because the sphere ties all the planes together, and “vector” because higher-dimensional analogues of lines and planes are called vector spaces.

The topology of a vector bundle provides information about the underlying space. The tangents to a circle, for example, form a cylinder. As proof: rotate each tangent line through a right angle, out of the plane of the circle, and you get a cylinder. There is another vector bundle associated with a circle, in which the lines are twisted to form the famous Möbius band, a surface that differs topologically from a cylinder since it has only one side. Atiyah applied these ideas to “elliptic curves”, actually doughnut-shaped surfaces with interesting number-theoretic properties.

His next topic, K-theory, is a far-reaching extension of Noether's homology invariant. A cylinder and a Möbius band are topologically distinct because their associated bundles have different twists. K-theory exploits vector bundles to capture higher dimensional analogues of such twists.

The topic underwent a period of rapid development in the 60s, stimulated by remarkable links to other major areas of mathematics, and it provided topologists with a powerful toolkit of invariants.

Atiyah, often jointly with other leading mathematicians, was a driving force behind these developments. Important themes were the cobordism theory of René Thom (how one circle splits into two as you move down a pair of trousers from the waist to the leg holes, only done for multidimensional spaces) and the periodicity theorem, first proved by Raoul Bott, showing that higher K-groups repeat in a cycle of length eight.

Index theory has its origins in the observation that topological features of a landscape, such as the numbers of mountain peaks, valleys and passes, are related to each other. To get rid of a peak by flattening it out you must also get rid of a pass, for example. The index organises such phenomena, and can be used, in suitable circumstances, to prove that a peak must exist in some region.

A landscape is a metaphor for the graph of a mathematical function, and a sweeping generalisation relates the number of solutions of a differential equation to a more esoteric topological index.

Differential equations relate rates of change of various quantities to each other, and are ubiquitous in mathematical physics; the Atiyah-Singer Index Theorem, proved jointly with the American mathematician Isadore Singer in 1963, reveals a highly significant link between a topological index and the solutions of a differential equation.

In an appropriate mathematical setting this can lead to a proof that a solution must exist, so the Atiyah-Singer index has widespread applications to physics. Forty years after their discovery, the pair were jointly awarded the Abel prize of the Norwegian Academy of Science and Letters, in 2004.

Gauge theory arose in physics, formalising certain symmetries of quantum fields and particles. The first example arose from James Clerk Maxwell's equations for the electromagnetic field (1861), where certain mathematical transformations can be applied without changing the physics.

In 1954 Chen Ning Yang and Robert Mills extended this idea to the strong interaction, which holds together each quantum particle in the atomic nucleus. Symmetry turned out to be vital to quantum mechanics – for example, the recently discovered Higgs boson, which endows particles with mass, acts by breaking certain symmetries – and gauge symmetries have huge importance.

Atiyah contributed key ideas to their mathematics, using his index theory to study instantons (particles that wink into existence and immediately wink out again) and magnetic monopoles (particles like a north magnetic pole without any corresponding south pole).

In 1983 his PhD student Simon Donaldson used these ideas to prove a remarkable theorem: contrary to what almost all topologists expected, four-dimensional space has infinitely many distinct differentiable structures – utterly different in this respect from any other dimension. The broader context for all this work is superstring theory, a conjectured unification of quantum theory and Albert Einstein’s relativity.

Atiyah was born in London, one of four children of Edward, a Lebanese civil servant, and his wife, Jean (nee Levens), who was born in Yorkshire of Scottish descent. The family moved to Khartoum, Sudan, where Michael went to school before boarding at Victoria College in Cairo and then moving to Manchester Grammar school at 16 to prepare for Cambridge. He was always keen on mathematics. An inspiring teacher introduced him to projective geometry and William Rowan Hamilton’s algebra of quaternions, and he read about number theory and group theory – all of which clearly influenced his later mathematical interests.

In 1949, after two years of national service, he studied at Trinity College, Cambridge, remaining there for his PhD. He held positions at the Institute for Advanced Study in Princeton (including a professorship 1969-72), and at Cambridge and at Oxford, where he was Savilian professor of geometry 1963-69 and Royal Society research professor 1973-90. He became a fellow of the Royal Society in 1962, and was the society’s president from 1990 to 1995. In 1966 he won a Fields medal, the highest honour for any mathematician.

In 1990 he became master of Trinity College, Cambridge, and director of the Isaac Newton Institute for Mathematical Sciences, Cambridge. He was knighted in 1983 and made a member of the Order of Merit in 1992. After retiring from Trinity in 1997 he moved with his wife, Lily (nee Brown), whom he had married in 1955, to Edinburgh.

Atiyah was always a keen advocate of public engagement, giving popular talks on the beauty of mathematics and his lifelong passion for the subject. Small and compact, with a quiet, precise delivery, he could nevertheless hold an audience spellbound.

That is how I remember him, on that day in Tate Modern, telling non-mathematicians why we do it, what it is for, and what it feels like.

He and Lily had three sons: John, David and Robin. John died in a climbing accident in 2002; Lily died last year. Michael is survived by David and Robin.

Michael Francis Atiyah, mathematician, born 22 April 1929; died 11 January 2019.

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Ruth McKenzie

## Dr Eric Griffiths (1953–2018)

Eric Griffiths, Fellow of Trinity College and, until his early retirement after a stroke in 2011, Lecturer in English at the University of Cambridge, died on 26 September, 2018, at 65. The main external facts of his life are deceptively

simple; indeed, the first sentence includes the most important of them. The son of Liverpool-Welsh parents, fluent in Welsh before English, he won scholarships to the Liverpool Institute High School for Boys and then Pembroke College, Cambridge, where he performed brilliantly in the English Tripos. After a year in Princeton, a PhD in Cambridge on ‘Writing and Speaking in the work of Eliot, Yeats and Pound’ supervised by Christopher Ricks and a research fellowship at Christ’s, Eric came to Trinity in 1980. And here he stayed. He was a teaching fellow, combining dedicated teaching of undergraduates with his university lectures, and also a resident. Despite his deep and often lasting friendships with both men and women, he always lived on his own, first in an airy, two-floor set over the gate into New Court, then in a many-roomed set tucked away in Bishop’s Hostel and finally, after the stroke, in specially adapted rooms in Great Court, until it became impossible to provide adequate care in college for his deteriorating condition.

Such externally uneventful lives are common for academics, and they do not usually create a problem for their obituarists, because the slender CV is complemented by a lengthy List of Publications, the printed record of their achievements. By contrast, Eric produced just one monograph, *The Printed Voice of Victorian Poetry* (Oxford University Press, 1989; reprinted 2018). Through complex but rarely over-contrived close readings of Tennyson, the Brownings, Patmore, Hardy and Hopkins, he studies how the printed page of poetry, through written devices such as punctuation, rhyme, assonance and line-endings, can show the author's intended voice, the intonation that gives the words their full sense. He points also to the special moments where the text is written so as to leave open different ways of voicing the lines, so adding an extra level of complexity to its meaning. Social nuance often lies behind tone, and so Eric scrupulously supports his close-readings with detailed evidence from social history. In the first chapter, by contrast, Eric writes as a philosopher, developing ideas from Austin's theory of speech acts to attack Jacques Derrida, then at the height of his popularity, whose insistence on detaching texts from their authors would make the search for authorial voice a useless one.

*The Printed Voice* was recognized by the reviewers as a fine book and the work of an extraordinarily gifted close-reader of poetry. But Eric did not follow the path of academic publication he had, perhaps somewhat reluctantly, opened by it. He published just three articles in academic journals, on Tennyson (1992), Dryden (1994) and Christina Rossetti (1997), the last two of which were based on public lectures.

Obituarists have filled the gap with descriptions of Eric Griffiths the Character, serious about literature, certainly, but about little else: host of 'boozy and raucous parties'; 'the virtuoso lecturer ... who wore trainers by Armani' and who, 'taking a sip of whisky at the lectern' would pepper his lectures with 'pop-cultural references'; possessor of 'the sharpest tongue in the University', an 'academic controversialist'. His kindness, to 'a favoured coterie', is recounted, but also his severity, even his 'ferocity', his ruthlessness towards students' pretensions, his propensity to make enemies, his status as 'an academic controversialist'; and so too is the notorious admissions interview he gave in 1998, where, according to the applicant's complaint, he showed a snobbish contempt for her Essex state school origins and her ignorance of Greek. (To Eric's friends the story always seemed improbable, since he lacked any trace of snobbery, and he himself, despite his many languages, knew no Greek.)

Although in parts Eric the Character corresponds to the real person, this caricature obscures what was most singular about him. Eric was not merely serious about literature; he was deeply serious. He set an example of how to live an intellectually serious life and challenged his friends to live up to it themselves. He was someone who asked the most difficult questions and would not let you away with easy answers – or, indeed, any answers; someone who was not afraid to tell you when you were wrong, intellectually or morally.

Eric brought this seriousness to his own work. He wrote so little in the standard academic formats of articles and monographs, especially after his career was fully established, not through weakness of will or lack of purpose, but because his aims were different. He was a supreme practitioner of literary criticism based on close reading of text, but he was not content just to use this technique in a way that would produce academically acceptable research, revealing, with historically-informed skill fresh, exciting, subtle readings of authors, as he had done in *The Printed Voice*. He wanted to use it as a way of thinking about the deepest human problems – that is to say, about the problems of philosophy and theology, though usually not presented in the technical terms of those disciplines. But his way was not, not at all, to try and read philosophy or theology out of, or into, literature. Rather, literature, especially the process of trying to understand pieces of it, in their tiniest textual details, provided the beginning, and the points of recourse and often conclusion, for reflections that also had a momentum of their own.

In teaching, this aim became one that Eric projected as an ideal for his students. His lectures were celebrated as entertainments and always packed with undergraduates, but the jokes, and the dazzling play of erudition, verbal dexterity and interpretative brilliance, sugared a pill, not of useful content – there was nothing that could be taken away for Tripos; it is hard to imagine what form notes of these lectures could take – but of probing, worrying questioning. Listeners were challenged to leave behind their certainties, their loose habits in drawing inferences and reaching conclusions, and to think, slowly and painfully, often from or in company with the interplay of idea, vocabulary and poetic form, just as Eric himself did. We can now glimpse a few of these lectures as collected in *If Not Critical*, edited by Freya Johnston, a pupil of his, and published by Oxford University Press shortly before his death.

The same aim inspired Eric's most extraordinary pedagogical project, Trinity English. Trinity English was Eric's invention, though not his sole creation. It required the cooperation of his colleagues, centrally Adrian Poole, without

whose tolerant intelligence, judgement and ability to smooth the rough edges left by Eric's personal and intellectual impetuosity, the plans would have failed; and also of the prodigiously learned Jeremy Maule, when he came to Trinity in 1986. Trinity English was never an explicit programme, but rather an understanding, shared, if not fully, by students and those who taught them, that things at Trinity were done differently from elsewhere. In particular, along with weekly supervisions, the undergraduates attended a variety of college classes, which explored areas and aspects of literature, philosophy, history and theology at or beyond the edges of even the capacious English Tripos, and which all shared the same object, of teaching them to question and to think.

Eric also found an outlet more open to his intellectual aims in types of publication other than the academic monograph or article. His many reviews for the *Times Literary Supplement* are not really reviews at all, but essays, often extended ones, on the authors discussed by the books he is considering, and experiments in his characteristically intricate and indirect style of thought. They are far from the ephemeral pieces the medium might suggest, although they usually require the recoil of disapproval, often violent (of, for example, critical theory), to set them in motion. His activities were not restricted to print. Eric's seriousness rested, not just on a deep knowledge not just of European literature (English, French, German and Italian), philosophy and theology, but also of art and music (he learned to drive late in life, specifically so that he could drive around Europe, photographing Romanesque churches.) All these meshed together closely for him, and television gave him the chance to make the connections seem obvious everyone. When the Musée d'Orsay was about to open, he was sent there with a BBC film crew. He opened the programme with the camera riding over the Pont Alexandre III accompanied by 'Je veux vivre' from Gounod's *Romeo et Juliette*; later on, the shots of Degas's ironers were juxtaposed with his ballet dancers – both, Eric pointed out, depictions of bodies strained and tired by work.

In the last few years before the stroke, Eric published two longer pieces: he wrote a chapter in an edited book ('Empson's God' in *Some Versions of Empson*, ed. Matthew Bevis, 2007), and he co-edited with Matthew Reynolds an anthology of *Dante in English* (Penguin, 2005). The essay on Empson, though full of Eric's usual passion and shafts of brilliance, is too dense and allusive for the non-specialist. The anthology is prefaced with a hundred-page Introduction, Eric's responsibility. 'An introduction in English to Dante, not an introduction to Dante-in-English', it is probably Eric's best extensive piece of writing. It shows

rather than tells, raising the questions medievalists should ask about Dante but rarely do – Why did he write in Italian, not Latin? Who did he expect to read the poem? Did he think of it as a treatise or rather the account of a pilgrimage or an act of confession? Why is it set at Easter? – and illustrating how Dante compounds his meaning, echoing words and phrases between cantos and *cantiche*. Yet it is also an especially felicitous vehicle for Eric’s own thinking, because Dante’s own concerns, and the concerns understanding him raises, though superficially distant, were deeply alike, as, for instance, their shared ability to see the sacred in the everyday. So, explaining how to understand Dante, but also explaining how to understand, Eric writes: -

Even today, if you walk round an old but still serving church, you may light on a rich jumble: the statue of a saint whose cult has subsided, lacking an arm; a pile of cyclostyled pastoral letters; plasticene oxen, asses and cribs; the various wherewithal of flower-arrangers; in my experience, there is also often (usually behind the altar along with inexplicable quantities of papier-mâché) a mineral-water bottle containing a virulently green liquid. Such clutter bears witness not only to the fads and makeshifts through which over the years fervour passes, but also to one level of the actual processes known by theologians as ‘the incarnation of the Word’ ...

As such passages show, the Church was central to Eric’s life and thinking (although a distinguished American English professor cited this very passage, without the last sentence, as an example of his trying ‘to satirise churches and moralists’ – no wonder he fought shy of academic literary criticism!). Brought up as a chapel-going Protestant, he joined the Catholic Church in the mid-1980s. Although he developed a specifically Catholic identity, expressed in some of his literary enthusiasms (Newman and Hopkins, for instance, to say nothing of Dante – or Beckett) and evidenced by the number of his students who followed him in joining the Church, Eric avoided any religious exclusivity in his way of thinking, writing and teaching. It is easy to imagine Eric being Eric, had he been a tortured atheist or agnostic, as perhaps, at times, he may have been. What cannot be envisaged, because it would not have been Eric, is an Eric who did not much care about such things and complacently accepted that there is no God (as most people around him did and do).

Eric’s stroke left him fully able to think and understand, but almost without any words of his own at all. For someone so eloquent and precise, determined to express every nuance of his thought, his inability to utter or write coherent

sentences seemed like a torture from the *Inferno*. Unlike Dante’s damned souls, however, Eric bore his pain cheerfully. His frustration, when an interlocutor could not guess the question he had formulated internally but could not express, was no different from that he used to show when a student or friend’s replies failed to measure up to his penetrating queries – except that it was gentler and kindlier. I shall remember the Eric of these last years with no less respect than the incisive writer and conversationalist, and with even more affection.

*John Marenbon (1978)*



### **Professor Robert Ralph Neild (1924–2018)**

Economist who served as an adviser to the Treasury in the 1950s and 60s and initiated research on the arms race and social trends.

For four years from 1967 the economist Robert Neild, who has died aged 94, served as founding director of the Stockholm International Peace Research Institute (SIPRI).

There he established a number of programmes that have had a long-lasting impact: the Yearbook on Armaments, Disarmament and International Security (as it is now called), still an essential reference for anyone working in the field of arms regulation; research on the arms trade, including the construction of statistics on the trade in major weapons that continue to be widely used today; and research on chemical and biological warfare, which led directly to the conventions banning these types of weapons.

He was also one of the pioneers of the concept of defensive defence – the idea that it was not necessary to engage in an arms race in order to protect the west effectively against the Soviet threat.

This concept was taken up by Mikhail Gorbachev, who adopted a parallel concept of “reasonable sufficiency” that allowed him to reduce military spending and to sign in 1987 the INF (intermediate-range nuclear forces) treaty, and engage in negotiations for the START (Strategic Arms Reduction) treaty – a process that marked the beginning of the end of the cold war.

Neild's approach to peace research involved painstaking empirical observation of the real world. "Facts talk," said the eminent Swedish economist Gunnar Myrdal, SIPRI's first chairman.

Neild had established this for himself during the second world war when he was invalided out of the RAF in 1944 and sent to work for operational research. "The beauty of operational research," he later wrote, "was that there was no established discipline; there were just problems to which anyone might contribute. Physicists, biologists and scientists from other disciplines were applying their minds to the problems of war."

He was set to work collecting information on the sightings of U-boat snorkels with the aim of identifying a pattern of behaviour. He used the knitting needle system, the same system I used in constructing arms trade statistics when I worked for him at SIPRI.

Each piece of information was put on an index card with a row of perforated holes at the top. You punched the top of a specific hole to demarcate a particular characteristic – say, a specific recipient or supplier of type of weapon. Then if you wanted to sort the data according to that characteristic you put a knitting needle through the relevant hole, and the cards you needed fell out. It is the same principle that underlies the digital databases we use today.

After the war Neild was to apply this approach to real-world problem solving, initially in Geneva at the UN Economic Commission for Europe (1947-51), headed by Myrdal, where my father, Nicholas Kaldor, was research director. Neild edited the Economic Survey of Europe, compiling information on industrial production, trade and inflation at a time when there were very few statistics, and on the same principle of setting aside preconceptions as much as possible.

In a similar vein, he edited the Quarterly Economic Review at the start of his time with the National Institute for Economic and Social Research (1958-64), and while economic adviser to the Treasury (1964-67) he initiated a survey of social trends, discontinued by the Conservative government in 2010.

In later years he continued to apply his mind to practical problems. He loved oysters and puzzled over why oysters are so scarce in Britain and so abundant in France. With *The English, the French and the Oyster* (1995), he won the André Simon prize for food writing. In it, he argued that Britain applied laissez-faire strategies and allowed oysters to be fished to extinction, while France applied planning methods and protected the oyster beds.

He also studied the problems of public corruption, starting from the premise that corruption is the norm and the puzzle is how to explain those places where corruption has been largely eliminated. And, as steward of Trinity College, Cambridge, he pored over bursary files in order to discover how the building of Trinity was financed and how it determined the type of stone used or the shape and scale of different buildings and quads.

Born in Peterborough and brought up in Letchmore Heath, Hertfordshire, Robert was a twin, and one of three children of Quaker parents, Ralph Neild, an Indian civil servant turned lawyer, and his wife, Josephine, the daughter of J Allen Baker, a Quaker industrialist and MP. Robert was much influenced by his uncle Philip Noel-Baker, a passionate peace activist who won the Nobel peace prize.

From Charterhouse school in Godalming, Surrey, he went to Trinity to study on a short course, joining the RAF in 1943. He returned in 1945 to complete his economics degree in two years, and was taught by the brilliant Marxist economist Piero Sraffa.

He witnessed at first hand the devastation of war both as a consequence of his time in Germany working for operational research and a journey across Europe by car through Yugoslavia to Greece, which he made with his cousin Francis Noel-Baker, as an undergraduate.

In the 1950s and 60s he gave policy advice to the Labour party and even attempted to become a parliamentary candidate. His first stint at the Treasury (1951-56) was followed by his first as a fellow of Trinity and a lecturer (1956-58); when he returned to the college, it was as professor of economics at the university (1971-84). But he much preferred research to teaching and he found his last years as professor deeply disappointing, as abstract mathematical modelling took over the discipline. "My earth-bound approach," he wrote, "was out of fashion." But it is much needed now.

His marriage to Nora Sayre in 1957 ended in divorce four years later. In 1962 he married Elizabeth Griffiths, and they had a son and four daughters. They divorced in 1986, and in 2004 he married Virginia Matheson. She, his children and his twin sister, Barbara, survive him.

Robert Ralph Neild, economist, born 10 September 1924; died 18 December 2018.

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**Professor Sir Henry Peter Francis Swinnerton-Dyer**  
**BT KBE FRS**  
**(1927–2018)**

Distinguished mathematician acknowledged as an expert on number theory who served on the University Grants Committee.

Peter Swinnerton-Dyer, who has died aged 91, is famous among mathematicians as one author of the Birch and Swinnerton-Dyer conjecture in number theory. Published in 1965, this was immediately influential, becoming even more prominent in 1999 as one of the Clay Mathematics Institute’s seven \$1m Millennium Prize Problems, alongside the Riemann hypothesis.

Swinnerton-Dyer’s first published paper appeared in 1943, when he was 16 and still at school. His most recent publications, which are substantial, date from 2012-16, and he was pursuing major new research directions well into his final year. In between he served as master of St Catharine’s College, Cambridge, and vice-chancellor of Cambridge University, before moving to the civil service as chair of the University Grants Committee (UGC).

The B-SD conjecture was made on the basis of computer calculations, the first serious application of computers in pure mathematical research. However, the computing facilities available at the time were rudimentary; to the point that Swinnerton-Dyer himself wrote the first operating system for Titan, the successor at the Cambridge Computer Laboratory to the EDSAC2 on which he carried out the computations with Bryan Birch. He later described himself on occasions as a computer scientist masquerading as a pure mathematician.

The B-SD conjecture states that, given a cubic equation in two variables with integer coefficients, the number of rational solutions is governed in a precise way by the L- function of the elliptic curve it defines. (L-functions of elliptic curves also play a central role in Andrew Wiles’s proof of Fermat’s Last Theorem.) While the B-SD conjecture is a key problem in modern mathematics, and much is known about it, a complete proof remains elusive.

In view of modern applications of number theory to cryptography and internet security, workable solutions to problems around B-SD might be worth a great

deal more than a million dollars to well-informed cybercriminals or their opponents.

Swinnerton-Dyer was born at Ponteland, Northumberland, the son of Sir Leonard Swinnerton-Dyer and his wife, Barbara (nee Brackenbury). The family moved to Shropshire early in Peter's childhood. His father, as well as being a baronet and member of the landed gentry, was an engineer and successful businessman, and chair of several companies. He was also a well-known figure in British chess circles, but Peter was the first in his family to go to university. He read a lot and enjoyed doing sums; his mother supported his academic ambitions and his local school teacher recognised his mathematical aptitude.

He won a scholarship to Eton and in 1945 went to Trinity College, Cambridge. As a graduate student he studied under JE Littlewood, but never completed a PhD. However, in 1950 he became a fellow of Trinity, and remained there until 1973, with a crucial year's visit to Chicago in the 1950s, where he worked with André Weil, an influence that set him on course to the famous conjecture and to much else besides.

Swinnerton-Dyer's role at Trinity included a spell as dean, responsible for discipline. His sympathy with students and liking for their company (especially with cider, or evening board games) made him a less than feared figure (the family motto is *Terrere nolo timere nescio*, roughly "Unthreatening; undaunted"). In 1973, at the relatively young age of 46, he was elected master of St Catharine's. He remained there for 10 years, frequently preferring student company to that of the fellows. During this time the character of the college was enriched by the admission of women.

The year 1983 brought abrupt change: he resigned from St Catharine's, took up the UGC chair, and married the archaeologist Harriet Crawford. This was a turbulent time in university finances: Swinnerton-Dyer worked closely with the education secretary Sir Keith Joseph.

Though himself an SDP member, he respected both Margaret Thatcher and Joseph and was influential in informing them of the importance of research quality in judging universities. While by no means perfect, the research assessment system then introduced contributed to the competitiveness of UK universities in the world. He left the Universities Funding Council (successor to the UGC) in 1991.

Swinnerton-Dyer was elected a fellow of the Royal Society in 1967, succeeded his father as 16th baronet in 1975 and was knighted in 1987. He won the Sylvester

medal of the Royal Society and the 2006 Pólya prize of the London Mathematical Society, and was awarded honorary degrees at Bath and Warwick universities.

Even as head of the UGC-UFC, he had never ceased to do mathematics, and published several major papers during the 80s. His mathematical work was remarkable for its originality, freely mixing ideas from different areas to attain unexpected insights. He was fearless in his choice of problems. From the 90s, he pursued work on 2-descent (a method going back to Fermat) as a way to study rational points on varieties fibred in elliptic curves; the aim being practical calculations to determine for interesting classes of algebraic surfaces (and so on) whether rational points exist, and if so, how many.

This sometimes involved highbrow modern theory, but not as a first preference. The quest for a beautiful theory never ruled out cobbling together a messy or convoluted solution that actually worked. Despite the seemingly modest viewpoint, Swinnerton-Dyer obtained very significant results, several in areas previously considered intractable. One of his papers was conceived while on a tour of eastern Anatolia with Harriet: latterly he often accompanied her to archaeological meetings.

Stories about Swinnerton-Dyer abound. In addition to his love of student company and board games, he was more than competent at squash, tennis and real tennis. He played chess well and bridge to international standard: he was part of the British team that came second in the 1953 European championship.

In a tournament, Swinnerton-Dyer once scuttled his opponents' grand slam by bidding eight clubs; the rules at the time invalidated an impossible bid made by mistake or oversight, so he first informed the tournament director that his bid was intentional. The rules of bridge were subsequently revised to prevent this.

Swinnerton-Dyer was an inspirational if idiosyncratic teacher. His genial personality, exceptional erudition and generous support for students and younger colleagues won him many lasting friends.

His wife survives him.

Henry Peter Francis Swinnerton-Dyer, mathematician, university administrator and civil servant, born 2 August 1927; died 26 December 2018.

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## A Ninetieth Birthday speech 7 November 2018

### Ian Glynn (1960)

Until I retired, I spent most of my time doing experiments or teaching or reading, but following my retirement – my life changed. As Martin Rees once observed, for Trinity Fellows retirement simply means a change of career. So I then spent:

*most of my time* writing three books;

*a good deal of time* writing biographical memoirs about four of my physiological colleagues (all connected with Trinity);

*and some time* continuing my interests in College, University and wider committees.

My first book *An Anatomy of Thought: the origin and machinery of the mind*, was published in 1999, about four years after I had retired. Its origin was an argument I had had with the mathematician and physicist Roger Penrose, about experiments done by Benjamin Libet and his colleagues, which had led me to write a critical article in *Nature* – an article which was, incidentally, appreciated by Francis Crick. The aim of my book was to explain – not just to medical and science students but also to laymen – why the nature of consciousness is more of a mystery to science than the origin of life.

One of the pleasantest features of writing this book was the extraordinary generosity of the many friends and colleagues without whose expert advice in disparate fields the task would have been impossible. Above all, Graeme Mitchison, mathematician, neuroscientist and molecular biologist, who died earlier this year, was a constant source of encouragement and helpful criticism.

My second book, *The Life and Death of Smallpox*, was published in 2004, and was written in collaboration with my wife Jenifer. She had been reading how Leopold Mozart, very reasonably worried about using the available tough method to inoculate his eight-year-old son Wolfgang against smallpox, decided it would be better to risk the disease. This seemed to Jenifer to have a contemporary relevance, foreshadowing the reaction to Andrew Wakefield's unreasonable and disastrous condemnation of the measles, mumps and rubella vaccine.

The story of smallpox, starting at least as early as the Pharaohs, ended with the dramatic twenty-year eradication campaign beginning in 1959. It was well worth investigating, and it absorbed us both.

When Jenifer and I agreed to write the book together, we assumed that Jenifer would write the history and that I would write the science. In fact we both got so interested in both that it was sometimes difficult to remember who had written a particular paragraph.

My third book, *Elegance in Science*, was published in 2010. Curiously, twenty years earlier, I was invited to give a talk to an undergraduate science society. My colleagues and I had, as it happened, just got some very interesting experimental results, but we were not yet sure that those results, and our interpretation of them, were valid. To talk about work that might later prove to be wrong would be rash. On the other hand, to talk about our older experiments while we were preoccupied with thinking about more recent ones did not seem very inviting. In this situation, I suggested that I talk about a subject that had fascinated me since my schooldays: the nature and attractiveness of elegance in science. I was doubtful about whether my suggestion would be accepted. But it was accepted, the talk was given, and I wondered at that time if the talk could usefully give rise to a book. More than twenty years later, it did.

The book discusses many examples of elegance in science. Here are some of them:

First, the simple laws discovered by Kepler and Newton that describe the movements of planets;

Secondly, Galileo's experiment showing that when a cannon ball weighing more than a hundred pounds and a musket ball weighing half-a- pound were dropped together from a great height, they reached the ground virtually at the same time. This was contrary to the accepted Aristotelian view (already more than 2000 years old) that the speed at which a body falls is proportional to its weight;

The third example I discussed was Thomas Young's work, showing that light consists of *waves rather than particles*; and this led Young to originate *the trichromatic theory of colour vision*.

Fourthly, I discussed an experiment by the psychologist Gregory, in which you sit in a dimly lit room holding your hand in front of

you and moving it alternately towards and away from you, so the image of your hand on the retina grows and shrinks but the size of your hand doesn't seem to change. That is what you would expect. But Gregory then introduced a very strong flash of light, after which you see only the much stronger persistent image on the retina, and because this persistent image doesn't vary in size, *as you move your hand towards you, you feel the hand must be shrinking, and as you move it away from you, you feel it must be enlarging.*

And finally, I discussed Crick and Watson's elucidation of the *marvellously economical mechanism of DNA-controlled inheritance.*

Now let me turn to the biographical memoirs I wrote about four of my physiological colleagues, Andrew Huxley, Richard Keynes, Pat Merton and Richard Adrian. All had been Fellows of the Royal Society, and all had been Fellows of Trinity apart from Richard Adrian, who had been an undergraduate at Trinity, and later Master of Pembroke. The memoirs I wrote about Richard Keynes and Pat Merton were written for the Royal Society. Those I wrote about Andrew Huxley, Richard Keynes and Richard Adrian were for the Dictionary of National Biography. (It seemed to me odd to write memoirs about Richard Keynes for both the Royal Society and the Dictionary of National Biography, but after I had written one for the Royal Society I had a letter from the Dictionary of National Biography saying they liked what I had written for the Royal Society, but could I write a shorter version for them – which I did.)

Writing these memoirs made me realise how effective colleges are at helping us to know our colleagues. Quite a time ago, talking to Robert Neild who was already in his nineties, I commented that, as one got older, one was asked more and more often to write memoirs of one's colleagues. "Just wait", he said, "As you get older you will find such requests get less and less frequent." And of course he was right.

But I wasn't only interested in individuals or in science. As head of the Physiological Laboratory, I had been involved in administration at various levels, and I was, or had been, a member of various national committees, such as the Council of the Royal Society, the British Medical Research Council, and – surprisingly – the American Academy of Arts and Sciences. I don't want to talk about most of these committees, but the activity that gave me particular pleasure was membership of the *Trinity Development Plan Committee for New College Buildings.*

In the early 1980s the College wanted to build accommodation for undergraduates south of Whewell's Courts and the Wolfson building, and it needed to choose an architect. John Bradfield, our senior Bursar, suggested that we used *Architects' Co-Partnership*, who had designed the Wolfson building, and most of the Development Plan Committee were in favour; but Boyd Hilton and I wished to look further. I discussed this problem with our elder daughter, Sarah, who, as a Trinity undergraduate had studied architecture in Cambridge, and she strongly recommended *MacCormac Jamieson and Prichard*, and said that she was particularly impressed by the very good buildings they had designed for Worcester College, Oxford. So, in 1984 Jenifer and I visited Worcester College and were equally impressed. Boyd Hilton was also an admirer of the Worcester College buildings.

Anyway, the Development Plan Committee agreed to invite a few firms of architects to make proposals. I can't now remember which firms were invited, but the Committee was, I think, unanimous in choosing *MacCormac Jamieson and Prichard*. The result was the very attractive Blue Boar Court completed in 1989.

The following year the College decided to provide more accommodation for undergraduates and a few Fellows in Burrell's Field. By this time I was no longer a member of the committee, but the committee again chose *MacCormac Jamieson and Prichard*. The new buildings, which also included a common room and other amenities, were opened by the Queen in 1995, and two years later the new Burrell's Field buildings were awarded three prizes, including one from the Royal Institution of British Architects.

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That seems to me an appropriate place to finish this talk.

## College Notes



### Undergraduate Admissions 2019

by Glen Rangwala (2004)

Trinity's intake for October 2019 is 201 students: 193 regular undergraduates, and eight affiliated and exchange students. Selected from a field of 1197, our new undergraduates are joining us in the knowledge of the high expectations we hold of them, which they have demonstrated so far through their admissions tests, interviews and national exams. The large majority of our incoming students from the UK – 86% of them – not only met the tough requirements that we set for them in their A Levels or equivalent exams, but exceeded them. Over 100 of their co-applicants to Trinity received offers of places at other Cambridge Colleges, having been placed by us in the inter-Collegiate 'Pool', reinforcing the sense that we received a strong applicant field in the last round.

In some ways, it is a very diverse intake. Our applicants came from 80 different countries, and our selection reflected that. We have incoming students from, among other countries, Armenia, Philippines and Thailand, in addition to those from countries which often send us superb students, such as China, Serbia, Australia and Singapore. Perhaps somewhat surprisingly, we have seen over the last three years a significant increase in applicants from other countries of the European Union, while most other Cambridge Colleges have seen a decline. One can speculate that this is due to a sense among potential Cambridge applicants from outside the UK that, in a time of uncertainty, Trinity has the ability to safeguard its students' interests. As the admissions tutor, my role has also involved communicating with schools across the EU to reassure them of our continued enthusiasm for drawing the brightest and most promising students, irrespective of their national backgrounds.

It is also fairly diverse in terms of socioeconomic backgrounds. Out of all Cambridge Colleges, Trinity has given the second highest proportion of offers to UK students coming from disadvantaged backgrounds, measured in terms of areas where few school students go on to university. These students are given no special favours in the admissions process, and they must meet the same high academic standards for entry as everyone else. When they do arrive, we have the

same expectations for academic achievement – and indeed, in last year’s entry, 80% of those who came from the most academically disadvantaged backgrounds received end-of-year exam results that placed them in the top half of their years university-wide.

Trinity’s ability to attract not only top applicants from around the world but also highly promising students from poorer backgrounds within the UK is



Ian Olsson

sustained by an active outreach programme which works with schools and their students of all ages. In addition to the programme of school visits and its partnerships with local educational organisations, the College devotes a significant amount of its rooms, people and energy during the vacations to running a series of residency-based educational events for 16- and 17-year old students. In 2019, an innovative 4-day event for hosting 16-year old students alongside their school teachers – with the teachers attending a parallel series of talks and practicals – generated some of the most enthusiastic feedback I have seen in my time as admissions tutor, and we are looking to expand the programme for 2020.

Amidst these positive developments, there are remaining concerns. Our ratio in applications between the sciences and the arts now stand at exactly 2:1, and this is reflected in an intake that does not represent our ideal of an equal division between the arts and the sciences. It remains a significant concern that the number of female scientists is low, notwithstanding our active programmes for supporting and encouraging women in the natural sciences, engineering and maths. Like other Cambridge Colleges, we receive few applicants now from Scotland, and sadly there are no students from north of the border in the 2019 intake. These will be among the issues that the admissions team will be working on over the coming year, but suggestions and support from readers of the *Annual Record* are always appreciated.

## Graduate Studentships

### Internal Graduate Studentships

**Mr Radu C BIZGA NICOLESCU** (Romania), PhD in Chemistry.

**Ms Anna M CARDOSO** (UK), MPhil in American History.

**Miss Flora G CHARATAN** (UK), MPhil in Geographical Research.

**Mr Alexis DE VIVENOT** (UK), MPhil in Asian and Middle Eastern Studies.

**Mr T Theo E HUGHES-MORGAN** (UK), PhD in Social Anthropology.

**Mr Samuel J KILLCROSS** (UK), MPhil in Classics.

**Mr Jiri KUCERA** (Czech Republic), MPhil in Scientific Computing.

**Mr Stefan J W LACNY** (UK), PhD in Slavonic Studies.

**Dr Robyn H McCARRON** (UK), PhD in Psychiatry.

**Miss J Naemi C MELVIN** (UK), MPhil in Classics.

**Mr R Harry K B METREBIAN** (UK), PhD in Pure Mathematics and Mathematical Statistics.

**Miss Anna M MOODY** (UK), MPhil in English Studies: Criticism and Culture.

**Miss Ida A M PETÄJÄSOJA** (Finland), MPhil in Environmental Policy.

**Miss Anđela ŠARKOVIĆ** (Republic of Serbia), PhD in Mathematics of Information.

**Ms Bianca G S SCHOR** (France), PhD in History of Art.

**Mr Jonathan D TORRANCE** (UK), MPhil in Theology, Religion and Philosophy of Religion.

**External Research Studentships** were awarded to the following graduate students matriculating in 2019-20, in order to pursue research at Trinity in the fields indicated.

**Mr Radu G CRISTEA** (Romania), University of Warwick, MPhil in Economic Research.

**Ms Vera GAGARINA** (Russian Federation), Moscow M V Lomonosov State University, PhD in Slavonic Studies.

**Mr Mateo A LINCOLN** (USA), Harvard University, MPhil in Medieval and Renaissance Literature.

**Miss Marinela PAROVIC** (Bosnia and Herzegovina), University of Belgrade, PhD in Computation, Cognition and Language.

**Mr Angus J M RUSSELL** (UK), University of Oxford, PhD in Slavonic Studies (Honorary).

**Mr R Y Benjamin TAN** (Singapore), University of Oxford, MPhil in Political Thought and Intellectual History.

**Miss Katherine A VAN KIRK** (USA), Stanford University, MAST in Applied Mathematics.

**Other Graduate Studentships** were awarded to the following graduate students in order to pursue research at Trinity in the fields indicated.

**Miss Simone E ADAMS** (USA), North Carolina State University, Louis and Valerie Freedman Studentship in Medical Sciences, PhD in Pathology.

**Ms Elba ALONSO MONSALVE** (Spain), Harvard University, Charles Henry Fiske III Scholarship, MAST in Applied Mathematics.

**Ms Ariel R BARR** (USA), University of Texas, David Lam Graduate Studentship, MPhil in Physics.

**Miss Tatiana BEBCHUK** (Russian Federation), Lomonosov Moscow State University, Trinity Overseas Bursary, MPhil in Polar Studies.

**Ms Anna R BIRD** (USA), Purdue University, Krishnan Ang Studentship in Natural Sciences, PhD in Chemical Engineering.

**Mr Pablo BUSTILLO VAZQUEZ** (France), École Normale Supérieure Paris, ENS Exchange Scholarship (Paris), MAST in Pure Mathematics.

**Mr Paolo CAMPODONICO** (Italy), University of Genoa, Tom Howat PhD Studentship in Mathematics, PhD in Mathematics of Information.

**Mr Gianluca R CERULLO** (UK), University of Sheffield, Peter Scott Studentship in Zoology, PhD in Zoology.

**Mr Zhaomeng CHEN** (China), University of Oxford, Trinity Studentship in Mathematics, MAST in Mathematical Statistics.

**Mr Louis G CHRISTIE** (New Zealand), University of Auckland, Trinity Overseas Bursary, MAST in Mathematical Statistics.

**Mr Promise Frank EJIOFOR** (Nigeria), Central European University, Trinity Bursary for Students from Africa, MPhil in Social Anthropology.

**Mr Isaac C FRIEND** (USA), University of Chicago, Trinity Studentship in Mathematics, MAST in Applied Mathematics.

**Mr Edward A F C FURST** (Australia), University of Sydney, Trinity Overseas Bursary, MPhil in Economic and Social History.

**Miss Yuanyuan GUO** (China), Peking University, Peking Exchange Scholarship, MPhil in African Studies.

**Mr Stefan J W LACNY** (UK), Trinity College Cambridge, Trinity Pre-Research Studentship for Linguistic Study, PhD in Slavonic Studies.

**Miss Grace LEE** (New Zealand), University of Oxford, Trinity Overseas Bursary, MPhil in Medieval and Renaissance Literature.

**Mr Alexis MARCHAND** (France), École Normale Supérieure Lyons, ENS Exchange Scholarship (Lyons), MAST in Pure Mathematics.

**Mr Andrew P MARTIN** (Canada), McGill University, TCA Bursary for Economics and Finance and Trinity Overseas Bursary, MPhil in Economic Research.

**Mr Michael MAYNARD** (Australia), University of Queensland, Henry Arthur Hollond Studentship in Law, Master of Law.

**Miss Adva MOND** (Israel), Tel Aviv University, Trinity Studentship in Mathematics, MAST in Pure Mathematics.

**Mr Thomas S MORTIMER** (UK), Trinity College Cambridge, Alice and James Penney PhD in Studentship in English or European Literature, PhD in English (Renaissance Literature).

**Mr Max A NORMAN** (USA), University of Oxford, Trinity Overseas Bursary, MPhil in Classics.

**Miss Lita D PEÑA** (USA), Harvard University, Trinity Overseas Bursary, MPhil in Criminology.

**Mr Darren J PETERSON** (Australia), Hughes Hall Cambridge, Trinity Overseas Bursary, PhD in Law.

**Mr Runzhang QI** (China), University College London, Krishnan Ang Studentship in Natural Sciences, PhD in Chemistry.

**Mr Luc RADELET** (Canada), University of British Columbia, Dunlevie King's Hall Studentship, MPhil in Classics.

**Mr Julien S REIMAN** (USA), Columbia University, Dunlevie King's Hall Studentship, MPhil in American History.

**Mr Michael RIZQ** (UK), University of Oxford, Gould Studentship in English Literature, MPhil in English Studies: Modern and Contemporary Literature.

**Mr Angus J M RUSSELL** (UK), University of Oxford, Trinity-AHRC DTP Studentship and Trinity Pre-Research Studentship for Linguistic Study, PhD in Slavonic Studies.

**Miss Daria SAVANOVICH** (Russian Federation), St Andrews University, Trinity Overseas Bursary, MPhil in Advanced Computer Science.

**Mr Wonik SON** (USA), Harvard University, Eben Fiske Scholarship, MPhil in World History.

**Mr Victor S SOUZA** (Brazil), National Institute for Pure and Applied Mathematics, Trinity Studentship in Mathematics, MAST in Pure Mathematics.

**Mr Nikola SPASIC** (Serbia), University of Novi Sad, Eastern European Bursary, MAST in Pure Mathematics.

**Mr Jake A STATTEL** (USA), Swarthmore College, Dunlevie King's Hall Studentship, MPhil in Medieval History.

**Miss Olivia M STIEGMAN** (USA), University of Arkansas, Schilt Studentship for US Students, MPhil in Economics.

**Mr Kyle SWANSON** (USA), Massachusetts Institute of Technology, Trinity College-Cambridge Marshall Scholarship, MAST in Mathematical Statistics.

**Mr Zhe Hui Richmond TAN** (Singapore), National University of Singapore, Dunlevie King's Hall Studentship, MPhil in American History.

**Mr Joseph A M TURRINI** (France), École Polytechnique, Knox Studentship for French Students, MAST in Applied Mathematics.

**Mr Tyler R WALKER** (USA), University of Virginia, Lenox Conyngham Scholarship, MPhil in Economics.

**Mr Duncan A G WALLACE** (Australia), Trinity College Cambridge, Hollond-Whittaker Research Studentship in Law, PhD in Law.

**Mr Xiang WEI** (China), Peking University, Dunlevie King's Hall Studentship, MPhil in Early Modern History.

## From the Senior Tutor

### Professor Catherine Barnard (1996)



Students have always complained about having too little money. I did in the 1980s, and I received a grant. The situation is very different now. Students are paying well over £9000 in fees, which they borrow. They also borrow to pay for much of their living expenses. But what they can borrow is simply not enough. Parents are asked to top up this money; many do but some don't because their domestic circumstances make it too difficult. So Cambridge has long had a bursary scheme, the Cambridge Bursary Scheme (CBS), which tops up the money for students from lower income backgrounds (a family income of up to £42k a year) but the CBS has not kept pace with inflation. Further, it is divided up into 14 'buckets'. If the family income is just £1 over a particular bucket, the student stands to lose hundreds of pounds. So Trinity has invented a new scheme, the Pilot Top-Up Bursary Scheme (PTUBS) which supplements the CBS and also deals with some of its weaknesses. So it applies to those with a family income of up to £62k (when the Student Loan Company stops collecting the data). It also applies a formula so there is a smooth curve and no cliff edges.

The scheme was piloted last year. Trinity, together with 12 other Colleges, paid the top-up bursary to Fresher students. The idea was to help them with some extra money to enable them participate in College and University life. We commissioned independent research to see how the scheme was received. The initial results were encouraging and we have decided to continue the pilot this year to support both the new Freshers and the now second years. Three more Colleges have joined the scheme, bringing the total to 16.

When Trinity Classics student Matthew Sargent (2018) heard about PTUBS he said he was initially struck by 'the incredible generosity of individual donors.

*I was also really thankful, even relieved, to have this extra financial provision on offer. In a high stakes environment like Cambridge, the last thing students want to be worrying about is finance, so I felt that added burden taken off my back and the knowledge that I had this other 'reserve', so to speak, to call upon, was really beneficial.*

*I could concentrate on my studies while all the time not having to fret about pinching pennies. Just as important was the knowledge that I had enough*

*in the bank, not only to tide myself over through university, but also enjoy my time as a student. Where the PTUBS came into a league of its own was in the small things that make each and every day worthwhile and enjoyable.'*

Rebekah West (2018), studying Natural Sciences at Trinity, agreed that PTUBS support allowed her to focus on her studies.

*'PTUBS made a significant contribution towards my accommodation fees, which took a lot of pressure off me financially and helped me to concentrate on my work. If the scheme were to continue this year, I would save up for tickets to the Trinity May Ball, because it looked amazing but I didn't get to go.'*

I have provided you with some detail about the scheme because I want you to see how Trinity has led the way in thinking about innovative ways of helping students. This is not the only way that Trinity has supported the collegiate University, whether it be through the Joint Lectureship Scheme (where the College supports departments in helping to fund teaching posts) or the Cambridge Commonwealth Trusts, where the College puts in considerable amounts to support research in the University. It also spends over £2 million on support for research students. And all of this is to make Cambridge one of the best universities in the world, which Trinity profits from and contributes to. Trinity is not an island.

But we also look after our own students who perform very well in Tripos. Trinity continues to do outstandingly well in Mathematics and the Natural Sciences but there were also some exceptional results in the Arts and Humanities this year. Over 40% of our students achieved Firsts in 2019 (compared to the University average of around 30%). As well as some excellent results across subject groups, there were some outstanding individual performances. 15 Trinity students topped their Triposes. Another measure of the calibre of our students is the group of students who graduate having achieved First class results in every year. Of around 100 students who graduated with Firsts in 2019, half had achieved Firsts throughout their time at Trinity.

It is tempting to focus on the headline number of Firsts and other stellar performances but it is also important to reflect on the very many individual successes that may not be rewarded with a First, scholarship or a prize. I am aware of numerous personal triumphs experienced by students who have shown courage through significant adversity and set-back, including serious medical conditions or personal tragedy.

## The Chapel 2018–19

### Michael Banner (2006), Dean of Chapel



It is the normal expectation of those who arrive at Trinity that they will one day leave Trinity too. In the case of some Fellows, the gap between arriving and leaving can be a matter of many decades rather than a few years, and comes about as a result of death – the majority of leavings are happily not so caused however, and though they may involve a certain sadness are more properly an occasion for celebration. Trinity was founded not as an end in itself, but very specifically for the sake of sending out men (as it then was) equipped for service in the world. And so the passing of a cohort of graduands from the confines of the College at the end of the year deserves a toast more than a tear.

I think the same can be said of the passing of Chaplains. They don't arrive expecting to stay, and our hope for them at the end of their time here is just that they will go on, shaped by the opportunities and challenges Trinity has offered, to be of service in other spheres. Rather unusually this year we said farewell to two chaplains and both, having made enormous contributions here, have taken on posts where their gifts will be even more fully developed and deployed. Kirsty Ross who joined us in Michaelmas of 2015 has gone to a post at Melbourne Girls' Grammar School, and Andrew Bowyer, who arrived in the previous term, is now Dean of Divinity at Magdalen College, Oxford. It is a nice point to consider which one is now further from Cambridge.

For whatever reason, student life is now experienced as more stressful than it once was – or so at least it seems from the use that current undergraduates and graduates make of the counselling and other welfare services provided by the Colleges and the University. Our two departing chaplains made very significant contributions as one element in the College's care of students, and they both leave with the good wishes and good will of those to whom they ministered.

## List of Preachers 2018–19

### Michaelmas Term 2018: Saints

The Dean of Chapel on Perpetua

The Revd Canon Jonathan Boardman, Vicar of St Paul's Clapham, on Lawrence

The Revd Canon Victoria Johnson, Canon Residentiary at Ely Cathedral, on Cecilia

Professor Brian Brock, University of Aberdeen, on A Stone-throwing Saint

Professor Nicholas Vincent FBA, Professor of Medieval History at the University of East Anglia, on Thomas Becket

Mr James Penney, Alumnus and Chairman of Darwin Property Investment Management Ltd, on Oscar Romero

Mr Philip McDonagh, former Irish Ambassador, on Franz Jägerstätter

Remembrance Sunday: Sir John Tusa, alumnus and former Managing Director of BBC World Service and the Barbican Arts Centre

### Lent Term 2019: The Psalms

The Dean of Chapel on Psalm 130 – Out of the deep

Professor Richard Bauckham FBA, Senior Scholar at Ridley Hall, on Psalm 145 – I will magnify thee

The Right Hon. Frank Field MP DL, Member of Parliament for Birkenhead, on Psalm 133 – Behold, how good

Professor Robert Gordon FBA, former Regius Professor of Hebrew at the University of Cambridge, on Psalm 86 – Bow down thine ear

The Revd Kirsty Ross, Chaplain, on Psalm 22 – My God, my God

The Revd Canon Adrian Daffern, Vicar of Great St Mary's Cambridge, on Psalm 23 – The Lord is my shepherd

Professor Adrian Poole, Fellow, on Psalm 137 – By the waters of Babylon

The Right Revd Robert Atwell, Bishop of Exeter, on Psalm 49 – O hear ye this, all ye people

Commemoration Service: Professor Hugh Williamson FBA, alumnus and Emeritus Regius Professor of Hebrew, University of Oxford

## Easter Term 2019: The Good Society and ...

The Revd Canon Mark Poulson, Canon of Interfaith Relations in the Diocese of London, on Interfaith Relations

The Revd James Ridge, Chaplain General of HM Prison and Probation Service, on Prisons

Cressica Dick CBE QPM, Commissioner of the Metropolitan Police Service, on Policing

Dr Hugh Hunt, Fellow, on The Environment

The Revd Dr Andrew Bowyer, Chaplain, on Borders and Exiles

Professor Stephen Toope, Vice-Chancellor of the University of Cambridge, on Universities

The Dean of Chapel on The Church and the Good Society

## From the Senior Bursar

### Rory Landman (2006)



The Senior Bursar's Office looks after the College's investments and its Trust Funds. The team remains busy administering the College's investments, collecting the College's rents and disbursing Trust Funds.

The team comprises of Vanessa Stagg and Dawn Stonebridge in general administration (we sadly said goodbye to Sarah Akred earlier in the year, who left to work closer to home). We are shortly though due to welcome Lesley Howard to the team to assist with general administration. Phil Collins, Ruth Hefford and Andrew Manning work on the College's disbursements, Estates and Securities. We are also grateful to Jeremy Fairbrother (1992), former Senior Bursar, as Finance Secretary who assists with non-property matters.

The past year has seen heavy investment by the College in the Cambridge Science Park and at Dunsfold. This has kept the team exceptionally busy.

## From the Junior Bursar

Edward Knapp (2018)



I am writing this from the breathtakingly beautiful Great Court, on the first Sunday of Michaelmas Term 2019: as a reader of our *Annual Record* I am certain you will be picturing the outstanding architecture and beauty of the Court, awash with a crisp autumnal sunset, and our newly arriving freshers finding their way around our wonderful community. The energy here is remarkable: we are all looking forward to seeing our students, Fellows and staff thrive in the year ahead, to the Installation of our new Master, Dame Sally Davies, later this week, and to another outstanding year for the Trinity community past, present and future.

Last year, I had the great honour of becoming Junior Bursar, following in the footsteps of the outstanding Rod Pullen, whose dedication to the College for well over a decade has put in place the foundation for so much that is positive here. We are all tremendously thankful to him for his hard work, and we wish him a long, happy and healthy retirement.

As Junior Bursar, my duty is to serve as a compassionate custodian and Charity Trustee on College Council, and in doing so, to help us all to ensure that our education, learning and research takes place in the best possible environment. This brings with it a steady flow of challenges and opportunities to help shepherd our resources with great care, protect and invest in our estate and buildings for the long term, focus our endowment where it can bring greatest impact, and encourage our diverse community to be as joined up, collaborative and effective as we can possibly be.

One of the great joys of serving Trinity is the opportunity to help to bring together nearly 200 other Fellows, well over a thousand students, and 400 members of staff, in partnership with colleagues from across the University, the public and private sector, and far beyond, to help build the best possible working environment, and foundations for the future. I've always believed that it is the people that make a place, and in Trinity this is both a great truth and a great pleasure.

What a year it has been for the College. Our multi-million pound development on Round Church Street, providing brand new, high quality and centrally

located accommodation for Trinity just a stone's throw from College, progresses apace. Our archaeological dig has uncovered some remarkable artefacts, not least of which is a pocket sundial, preserved remarkably well, and of great historical significance. In just a couple of years we look forward to seeing members of Trinity settle in to their purpose-built, state-of-the-art accommodation, and to providing a thriving restaurant facility for Cambridge, not to mention a welcome flow of investment income for the College for the long term.

Designs and plans for the potential two year programme of work on North West Great Court, including the Master's Lodge and services to Nevile's Court and the Wren Library, are progressing well. During the summer, around 50 Fellows took the opportunity to see the survey and investigation works underway, and to discuss how we may care for and invest in the fabric and infrastructure for the next generation. I look forward to updating readers of the *Annual Record* on this important programme.

Our staff are as hard working, loyal and multi-talented as ever, and I must extend a heartfelt thank you to each and every one of them for their dedication and service to College. It's been a pleasure to meet so many of our staff one to one, or in small groups, over tea and informal discussions on Trinity's remarkable estate and capabilities - they never fail to ask the unexpected questions! I was pleased to be able to design and implement a comprehensive role evaluation and pay review exercise for all staff earlier this year: this has been completed for our Heads of Department, and is on track for completion for all of our colleagues by the end of the year. We are committed to investing in our staff fairly, appropriately and in line with their essential contribution to our community.

Our students continue to be the lifeblood of so much of what happens here at Trinity, and it has been thrilling to work with them on some important topics this year. Following a very thoughtful survey of over 400 students, and much discussion across College, a wide range of initiatives have been completed to improve the working and living environment for our students. I am also pleased to say that, as of last week, we have illuminated the path through the Fellows' Garden to our accommodation at Burrell's Field, a topic first explored more than three decades ago: now resolved, agreed and implemented in the last few months, and bringing joy to the steady trickle of students who have been singing College's praises!

Our technology and digital agenda progresses well, communications are moving forward, and we are investing time and energy in how we protect and handle our data and assets for the long term. Our Investment Committee continues to provide a welcome sounding board and source of wisdom on the wider world, and we are as thoughtful as ever in how we serve as compassionate custodians of our assets: the extensive political, environmental and diplomatic angles to this remain complex and central to our future success, and we continue to think and act for the long term.

So much of Trinity never changes: academic excellence, outstanding Fellows, students and staff, and a charitable purpose of profound importance to deliver education, learning and research for the world. And all of this, wrapped up in a scene of breathtaking beauty and outstanding history. Yet our community is awash with bright new minds every year, and this keeps us as forward-looking and thoughtful as ever.

On which note, I must sign off and make my way to Chapel. Congratulations, a heartfelt thank you and good luck to everyone who is set to help keep the magical flame of Trinity burning brightly for the year ahead: our remarkable students, outstanding Fellows, dedicated staff and multi-talented alumni, benefactors and members of the whole Trinity community. What a joy it will be to work with many of you in the year ahead in service of this special place, may Trinity thrive!

## The Library

### Nicolas Bell (2015)



Although students in many subjects have an ever-decreasing reliance on printed books for their studies, the Library remains in considerable demand as a place for concentrated study. We have made various structural improvements to the College Library over the summer, replacing the skylights and introducing some standing desk-spaces, and hope to continue these works next year.

Meanwhile in the Wren Library our plans to digitise a wide range of our most important books have expanded significantly thanks to the financial support of a number of alumni. We are systematically



A menagerie of beasts from one of the medieval bestiaries lent to the Getty Museum.

photographing all of the 140 Greek manuscripts in the Library to complement detailed new descriptions which are being created as part of a project to catalogue and digitise all of the Greek manuscripts in Cambridge, funded by the Polonsky Foundation. We will soon be adding a selection of the books annotated by Isaac Newton to the Wren Digital Library, with transcriptions of his sometimes obscure comments and an introductory guide discussing the ways in which Newton made use of his library.

The outstanding collection of artists' books donated by Nicholas Kessler in the years leading up to his death last year remains a popular subject for exhibitions and for presentations to visiting groups, and have attracted several further donations. We held an event to celebrate the 70th anniversary of the publishing house La Diane Française, at which its director Jean-Paul Aureglia presented us with a large number of the books he has printed over the last 25 years in collaboration with several French and Italian artists. Other donations inspired by the Kessler Collection were presented by the artists Nigel Hall and Peter Griffin, and Barbara Grigor-Taylor gave a beautifully printed edition of the *Dialogues of Lucian of Samosata* with woodblock illustrations by Henri Laurens (Paris, 1951). Apart from these gifts of luxurious art-books, the bequest of H. R. Creswick enabled us to buy a dozen books in the field of 18th-century aesthetics and metaphysics from the sale of the library of John Stephens, among various other useful accessions, and Professor Roger Paulin kindly presented a copy of the first edition of Schlegel's *Ueber dramatischer Kunst und Literatur* (Heidelberg, 1809).

The College lent several manuscripts to the British Library's major exhibition *Anglo-Saxon Kingdoms*, as well as to the Getty Museum's exhibition of medieval bestiaries, and an exhibition of the artist Julian Trevelyan at the Pallant House Gallery in Chichester. Various temporary exhibitions were held in the Wren Library, celebrating the 150th anniversary of the establishment of the Cavendish Professorship of Physics (the first five holders of the chair were all Fellows of Trinity) and the 100th anniversary of the successful attempt by a group of astronomers (chief among them three Trinity men, Dyson, Eddington and Crommelin) to prove Einstein's General Theory of Relativity. Other displays included an exhibition of medieval illuminated Psalters in connection with a conference of the Society for Old Testament Study, and an exhibition to celebrate the publication of a new three-volume study of *The Reception of Isaac Newton in Europe*.





# THE REGISTER

IN MEMORIAM





# The Register

## In Memoriam

- 1933** Dr J H Penrose, 13 February 2019
- 1934** Mr J G Lubbock, February 2019
- 1938** Dr J J Fleminger 3 September 2019
- 1941** Mr A C Jones, 19 December 2018  
Dr M G H Lewis, 16 December 2018
- 1942** Mr W H Earle, December 2018  
Mr J A S Plaister, September 2018  
Dr D L Pratt CBE, 13 March 2019  
Professor E H Sondheimer, 9 June 2019
- 1943** Mr J C R Clapham, 11 March 2019  
Mr A F Hickson, 13 April 2019  
Mr H O Smith, 10 December 2018  
Mr C Vivante, 22 June 2018  
Mr C C Von Bülow, 25 May 2019  
Dr C B Walker, 12 May 2018
- 1944** Mr F W Coates, 26 October 2018
- 1945** Mr D N Boyd, 7 August 2019  
Mr A F W Fry MBE, 2 July 2019  
Professor P H Jellinck, 20 February 2019
- 1946** Professor C S Davis, 29 October 2009  
Dr H E Lichtenstein MBE, 3 January 2019  
Mr J I Sharp, 2019
- 1947** The Revd P R N Appleford, December 2018  
Professor E L B Cherbonnier, 17 March 2017  
Professor D W Gooding, 30 August 2019  
Mr R A Roxburgh MChir FRCS, 6 February 2019
- 1948** Mr J F Leaf, 23 October 2018  
Mr C Moor, 21 February 2019  
Mr I W D Peterson, 6 May 2019  
Mr F J Williams, 5 January 2019

- 1949** Mr R A Blythe, 29 January 2019  
Mr J R Borrie, July 2019  
Mr P W Darwin, 4 November 2018  
Sir Aaron Klug OM FRS, 20 November 2018  
Mr S R Martin, 12 January 2019  
Mr C R Pearson, 2019
- 1950** Mr G R Pinto, 10 September 2018  
Mr B M Rooney, 31 December 2018
- 1951** Mr M L N Forrest, 16 January 2019  
Mr J F Kingston, 15 December 2018  
Mr D Mace, 29 April 2018  
Mr G A Marwood, April 2019  
Mr J M Money-Kyrle, 6 November 2018  
Mr R G Moore, 15 May 2019
- 1952** Mr J M Hemelrijk, 1 June 2018  
The Hon. Nigel Parker, 7 March 2019  
Sir David Rowland, 18 February 2019  
Professor R W Thomson, 2019  
Mr E C Walker, 28 September 2018  
Mr T G Whitworth, 17 April 2019
- 1953** Mr J E Feavearyear, 14 May 2019  
Mr T W Johnston, 24 August 2016  
Mr I G Kennington, 10 June 2019  
Dr J T Milburn, 23 September 2018  
Mr T J H Sweeting, 8 December 2018
- 1954** Mr W W J Barratt, 12 March 2019  
Mr N L M Boulton, 1 December 2018  
Mr P N Breyfogle, 22 November 2018  
Dr R S Deraniyagala, 26 January 2019
- 1955** Mr G L Bradbury, 25 January 2018  
Sir Nigel Broomfield KCMG, 29 October 2018  
Dr A Davey, 21 July 2018  
Dr A A Sinclair, 31 May 2019
- 1956** Professor A R Dicks QC, 8 November 2018  
Mr D J Page, July 2018  
Dr M Warner, 3 October 2018
- 1957** Mr A H Hughes, 1 November 2018  
Mr P Jefferson Smith CB, 22 December 2018  
Mr A J Sherlock, August 2018  
Mr D C Stewart, 28 May 2019  
Dr J K Whitaker, 25 January 2016

- 1958** Professor W J Jones, 20 July 2019
- 1959** Mr R D Sweetland, 21 June 2018
- 1960** Mr C Barcia Garcia-Villamil, December 2018  
His Hon. Robert Prendergast, 17 May 2019
- 1961** Professor A G Atkins FREng, 25 September 2018  
Mr A G S Pollock QC, 11 April 2019
- 1962** Mr R L Carter, 2 November 2018  
Mr R A Fawcett, 31 July 2019  
Dr A D McEwan FAA FTSE, 5 September 2018
- 1963** Mr J F Booth, 7 August 2019  
Professor P M J McNair, 6 November 2018  
Mr B G Rogers, July 2006
- 1964** Mr A V C Armstrong, 2003  
Professor R J McEliece, 8 May 2019
- 1965** Mr G A Ellis, 28 May 2019  
Mr J M Hepplestone, 15 April 2019  
Mr R J Smith, 2018
- 1966** Professor D C Gadsby FRS, 9 March 2019  
Mr D M Howitt, 1 August 2019  
Dr M F Yusuf, 5 December 2018
- 1967** Professor P C Milner MA MBA MB ChB, 3 January 2019  
Dr R E Warburg, 14 October 2018
- 1968** Mr P S Peters, 18 May 2019  
Mr C R Rosenstiel, 8 May 2018
- 1969** Mr S P Norton, 14 February 2019  
Dr G J Suggett, 27 April 2019
- 1970** Mr M J P McGinley, 25 September 2018  
Dr J C Phillips, 15 April 2019
- 1971** Dr D P B Fitzpatrick, 20 February 2019
- 1974** Professor T M Jessell, April 2019  
Mr R J A Silver, September 2019
- 1975** Mr I D Benjamin, 4 July 2019
- 1976** Mr D R Hutcherson, 17 April 2018
- 1979** Professor N Stone, 19 June 2019
- 1989** Mr W E V Lenox-Conyngham, 22 October 2018
- 1998** Mrs R Rogers, March 2019
- 2004** Dr A S Matikkala, 14 January 2019

*Dr C N Hamilton (1962) was wrongly included in the In Memoriam section of the 2012 edition, Dr D G King-Hele FRS (1945) in the 2015 edition, and Dr S S K Gunturi (1996) in the 2018 edition. We are happy to report that they are very much alive. The Editor sincerely apologises for these mistakes.*

## Addresses Wanted

We are grateful to all who have made it possible for us to update our records during the past year. If you are in contact with Trinity members who are not currently hearing from the College, please encourage them to contact us either by letter to the Alumni Relations & Development Office, Trinity College, Cambridge CB2 1TQ, by emailing [alumni@trin.cam.ac.uk](mailto:alumni@trin.cam.ac.uk) or by completing the 'Address Update' form on the website: [www.trin.cam.ac.uk/alumni/information](http://www.trin.cam.ac.uk/alumni/information).

Thank you,

*David Washbrook (1966), Editor.*



Joanna Cooney

