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Editor's note

The Editor thanks all those who have contributed to and advised on this year's issue, especially Claire Blake and Anouk Moser of the Development Office.







Principal's welcome

Anybody who still thinks the contemporary university remains an ivory tower, please think again. Whether over Brexit, attempting to contain the dissemination of incitements to all forms of hatred, or on wider questions of freedom of speech and tolerance, universities have been catapulted into the front line. The principles of openness and academic freedom, so fundamental to our very being, are now at stake.

The UK's EU referendum campaign and result are, I know, both controversial and divisive. Nobody knows what the final settled relationship will be with the European Union—if any. However, British universities in general and Oxford in particular are rightly concerned that an unintended consequence of the vote will be the grievous damaging of our standing as leading European academic research institutions. The free movement of EU researchers and students into the UK, and reciprocal arrangements for our own university members, contribute immeasurably both to the quality of our research and to our intellectual culture more widely. Sixty-four per cent of British scientific research is built on international collaborations, corner-stoned by EU funding—now approaching two in every five research pounds spent in Oxford. Access to the world's biggest research base and to bidding for its research programmes is central to the university's academic and financial success. All this is now at risk as a direct result of the Leave vote.

Meanwhile, government measures to close down so-called preachers of hate speaking at universities are so sweeping that, literally interpreted, they would prevent open discussion of core aspects of philosophy, politics and religion. On top of this is the new unwillingness among some students even to hear opinions they





prejudice may give offence; universities should, they believe, facilitate the creation of “safe spaces” where they will not be disturbed by what they consider unacceptable views on gender, ethnicity, race, sex or even culture. No argument or engagement: just exclusion and prohibition. The forces of closure are all about us and strengthening, forming the new divide in our politics and culture.

Hertford and Oxford have taken and are taking as robust a line as we can. The university made it clear during the referendum campaign that Brexit threatened to compromise its academic standing. Already there are harbingers that our fears may have been justified. Incidents of racial abuse against some EU nationals have been reported, and we are being sidelined or altogether omitted from bids for new EU research funding. We have to hope that, although the government says that “Brexit means Brexit”, it is mindful that this encompasses a range of possibilities. Universities need to maintain as close a relationship as possible with our EU partners: “taking back control”, if it means a weakening of British universities, will be self-damaging.

On “Prevent”, Hertford has joined other colleges and the university in insisting that the measures it takes should be subject to the higher obligation to preserve freedom of speech, including freedom to debate and discuss—and should be implemented with as light a touch as possible. As with so many of these initiatives, an unthinking tick-box approach can lead to unintended self-censorship, with student societies and fellows not wanting to get into the bother of inviting anyone with controversial views to speak. Our society closes not in one single rush, but by an accretion of actions *not* made. We are doing our best to ensure that Hertford stays open—and will resist calls to create safe spaces.

These are not the only elements of the outside world with which we must engage as openly as possible. In September and

“ I was delighted that my fellow heads of house joined Hertford’s lead in welcoming Syrian academic refugees at risk, rather as the university did Jewish refugees in the 1930s ”

October last year, I was delighted that my fellow heads of house joined Hertford’s lead in welcoming Syrian academic refugees at risk, rather as the university did Jewish refugees in the 1930s. Every college has chipped in in one way or another. It is taking time to find suitable candidates, but Oxford is now hosting six Syrian academics from the camps—and that is expected to increase over the next academic year, so that we become the largest host of Syrian academic refugees in Europe.

After our three successive anniversary celebrations—the Bridge, admitting women and the Tanner scheme—2016 has been a little calmer. In October last year, we handed back a precious volume of sixteenth-century maps and cityscapes—the 1573 Ortelius atlas—to its rightful owners, the Humboldt-Universität in Berlin, at a special event involving both the university and German embassy. The volume was originally held at the library of the Geographical Institute at the Humboldt (and is clearly recorded in its catalogue), before going missing following the Second World War. The legend is that a British soldier received the atlas in exchange for food and cigarettes in the weeks after Germany’s collapse in 1945, and on his return gave the book for safe-keeping to Kenneth Mason MC (1887–1976), the



first statutory professor of Geography at Oxford and a fellow of Hertford. It was impossible to return the atlas during the Cold War, but it could equally not be included in our own collection. Restoring the atlas to its proper home 70 years after the end of the war seemed more than appropriate and is a signal of British-German amity—much welcomed by the German delegation. To mark its return, we collaborated with the Bodleian Library to digitize the volume, with the result that this beautifully engraved and hand-coloured work—with remarkable knowledge of the world given its date—can now be studied and enjoyed worldwide via digital. bodleian.ox.ac.uk.

Fellows of the college enjoyed another year of distinction. Congratulations to Professor Martin Maiden, fellow and tutor in Biology, on his elections both to the American Academy of Medical Sciences and to a fellowship of the (UK) Academy of Medical Sciences. Congratulations also to our Career Development and Outreach fellow, Dr Catherine Redford, whose project “Academics in the Classroom: Facilitating Research-led Outreach Work with School Students” has earned her a prestigious British Academy Rising Star Engagement Award. Catherine has been working with other early career academics in English on ways to engage in outreach programmes with schools and colleges. It's a great accolade as well as a brilliant idea. Thanks to her and Registrar Dr Matthew Hiscock for another pioneering year of access work, launching our summer school and our special classes for

girls in science, technology, engineering and mathematics (STEM) subjects as well as maintaining a busy programme of visits to schools in our designated catchment areas of Essex, Camden and the Medway towns.

Professor Roy Foster, who has adorned Hertford for more than 25 years and who retired this summer in a blaze of congratulation, was awarded a British Academy Medal for his latest book *Vivid Faces: The Revolutionary Generation in Ireland, 1890-1923*; his was one of just three medals awarded by the BA this year for “a landmark academic achievement, in any of the disciplines supported by the Academy, which has transformed understanding of a particular subject or field of study”. You can read his account of his time with us further in this magazine. Professor Tony Wilson was again recognised for his outstanding contributions to microscopy, imaging and applied optics, with the Institute of Measurement and Control awarding him the 2015 Callendar Medal for his work on confocal microscopy. Our Professor of Chemistry Hagan Bayley was similarly honoured with the Menelaus Medal, which is awarded by the Learned Society of Wales to a person connected with Wales who has done outstanding work in any field of engineering and technology.

Congratulations go to our Law fellow Alison Young, who received the title of Professor of Public Law in the university's 2016 Recognition of Distinction exercise. Dr Alison Woollard gave the 2015 Haldane Lecture to the Genetics Society, titled “Genetics as Revolution”. As she says,

“ Restoring the atlas to its proper home 70 years after the end of the war seemed more than appropriate and is a signal of British-German amity ”



it is an exciting time to be telling this story: “We are developing the power to intervene in our genetic destiny. Now is the time to understand how this has come about, what it means, and how we should move forward: not just as scientists, but as a society.” Dr Kevin Hilliard, our German lecturer and fellow of St Peter’s College, won the title of “Most Acclaimed Lecturer in Humanities” at the OUSU teaching awards, not least for his innovative pedagogic techniques involving hand puppets of Goethe and other luminaries. The Hay Festival was graced by four of our fellows—Professors Peter Millican, Emma Smith and Mike Woodridge, along with Dr David Dwan. This was part of a great year for Emma, who marked the 400th anniversary of Shakespeare’s death with her new book, *The Making of Shakespeare’s First Folio*, an account of the first collected edition of Shakespeare’s plays and the life stories and reception of its various copies. The *Financial Times* declared it “a beautifully judged book about books, impeccably researched yet wry and affectionate”. As she describes further in this magazine, Emma also made headlines by discovering the 235th Folio in the library of Mount Stuart on the Isle of Bute. To cap her *annus mirabilis*, she was presented with an award for her “outstanding contribution to the teaching of English” at the National Association of English Teachers. She dedicated her award to her own English teachers, Mrs Chamberlain and Mr Gregory (as she said real teachers never have first names), along with our three English finalists who have this year joined the Teach First Scheme, Rebecca Carr, Rebecca Grant and Archie Jones (all 2013). Talking of well-reviewed books, Professor Christopher Tyerman’s *How to Plan a Crusade: Reason and Religious War in the Middle Ages* was also highly praised, varyingly described as a masterpiece, original and outstanding. *The Guardian* concluded its review:





"This magisterial study takes us to the administrative and intellectual hinterlands of the 11th, 12th and 13th centuries... reveals faithful minds more than capable of sophisticated planning, manipulative propaganda and the application of reason to religious warfare". Tyerman's hero is not Richard 1st or Bohemond, but the humble quartermaster who made the Crusades happen.

Our first Academic Visitor, the Chief Executive of UCAS, Mary Curnock Cook, triumphantly completed her year's appointment with a thought-provoking seminar in the Weston Library urging Oxford to revisit how it judges the exam results of state and private school pupils. Professor Chris Brink, just retiring as Vice Chancellor of Newcastle University and formerly Rector and Vice Chancellor of Stellenbosch University, detailed how the approaches he used to break down educational apartheid might be applied in Britain, and Mary herself reported UCAS's recent research that children who know by age ten they want to study for a degree are twice as likely to get into a selective university. The report can be read on UCAS's website.

Alumnus Tom Fletcher (1994), honorary fellow and former ambassador to Lebanon, also published in 2016. *Naked Diplomacy: Power and Statecraft in the Digital Age* is an account of the new era of iDiplomacy, and a call for all of us to exploit the possibilities of digitalization. Congratulations to Hertford alumnus Ollie Robbins (1993), who has been appointed head of the new EU Unit in the Cabinet Office. Hugh Sturzaker (1959) was made an MBE for services to health and the community in Great Yarmouth and Norfolk, and Denis Keefe (1979) was appointed CMG in the New Year Honours for services to British foreign policy. Zoe Lee (2004) won a magnificent silver medal rowing in the women's eight for Team GB at the Olympics in Rio (her second achievement of the year, after being awarded a PhD at King's College London). Soweto Kinch (1996) is hosting a new show, *Jazz Now*, on BBC Radio 3. Henry Carr (1976) has been made a Justice of the High Court. Our alumni team, captained by the irrepressible Jonathan Stewart (1968), won the inter-collegiate golf tournament for the second time. I very much enjoyed meeting our American alumni this year, not



only in Washington and New York, but also at events in Boulder, San Francisco and Toronto.

The Hertford Society has funded the renovations of thirteen historic portraits this year. Portraits of Josiah Pullen, William Denison (restored), William Newcombe, Thomas Sydenham, and Principal Newton (restored) will be hung in the newly renovated Old Hall over the course of the new academic year. Also restored, and due to go back into the main dining hall, are portraits of Principals McBride, Michell, Boyd, Cruttwell, Hyde and Ferrar, along with Tyndale and Fox. We are also expecting portraits of Spencer, Ryan and Warnock back from the Courtauld in 2017: the Hamilton Kerr Institute has restored ten of them, the Courtauld the remaining three. We will continue to display photographs of alumni on the hall's North wall, along with new special portrait commissions—in particular of Hertford women, starting with former (and first female) Home Secretary Jacqui Smith (1981)—to join the portraits on the other walls. Thanks to the Hertford Society for funding the renovations, and to Chris Mockler (1963) for making it happen.

Frances O'Grady, general secretary of the TUC, gave this year's John Donne lecture. Her spirited advocacy of Britain's EU membership as a protection of workers' rights prefigured her performances during the referendum campaign, persuading even trade union sceptics that she might have a point. This year's Hertford Conversations included alumni Jeremy Bentham (1976) and Paul Manduca (1970) talking about their careers and wider issues in the oil and insurance industries, respectively (Jeremy runs Shell's famous scenarios unit, while Paul chairs the Prudential). Dana Mills and I each rehearsed the arguments for and against Brexit at a well-attended—and lively—event at the Weston Library in June. My best argument for Brexit was that the subsequent economic calamity would stimulate not only much needed reform of British capitalism, but a recognition that,

after all, Britain needs to work with other European countries to achieve what it wants in the world. My arguments look as though they are about to be tested.

Hertford students recorded the highest proportion of Oxford students registering to vote in the EU referendum, at 77%. Hartfest, the student-organized arts festival in April, featured bake-offs, portrait drawing (including some rather fanciful portraits of the Principal), film screenings and a wonderful jazz performance. Our students are also promising innovators, being represented in the three winning teams in the Tri-Innovate competition. Thanks to them for competing, and to judges James Crabbe, Chair of Judging Panel (Wolfson), Tanya Heare (Wolfson), Briony Krikorian-Slade (Hertford, 2000), Michael Doyle (Hertford, 1988), Derek Laud (Pembroke) and Fiona Reid (Pembroke). Beth Potter (2014) played viola in the National Youth Orchestra of Scotland's BBC Prom on 7 August. Lily Erskine (2014) and Lily Goodyer Sait (2013) represented Oxford at the University Powerlifting World Cup, while Matty Hughes (2014) is an Oxford Blue and was awarded "player of the match" in the T20 Neptune varsity cricket match. For the first time in over ten years, Hertford's cricket team won a game in cuppers, then capped this by emerging as overall victors of the competition, having been placed at the bottom of the division just three years ago. A great achievement!

“ Zoe Lee (2004) won a magnificent silver medal rowing in the women's eight for Team GB at the Olympics in Rio ”



“Hartfest, the student-organized arts festival in April, featured bake-offs, portrait drawing (including some rather fanciful portraits of the Principal), film screenings and a wonderful jazz performance”

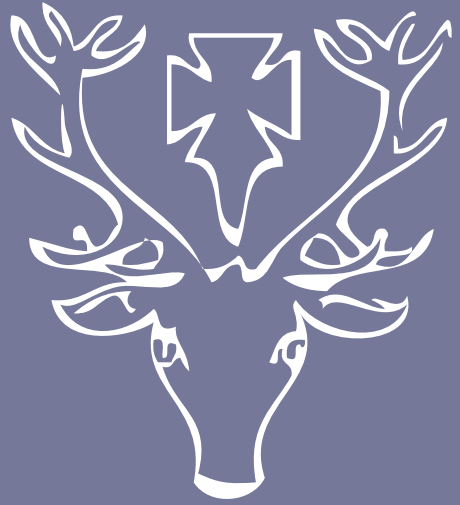
Each year, it is both a pleasure and regret to record moves in and out of the fellowship. Our Economics tutorial fellow Dr David Gill is leaving for an assistant professorship at Purdue University in Indiana, while Dr Dana Mills, our original and much-liked politics lecturer, is moving to NYU's Center for Ballet and Arts to dance, research and teach. Both will be much missed. Professor Ian McBride, a distinguished Irish historian and, like Roy Foster, something of an intellectual polymath, will succeed him as the new Foster Chair in Irish History. Nor should I let this paragraph pass without welcoming our new Vice Chancellor, Professor Louise Richardson—who has already dined and lunched at Hertford more often than any predecessor I can remember. She is a breath of fresh air, and I have great confidence that the university will prosper under her leadership.

I am sorry to record the death of one of my predecessors, Professor Sir Christopher Zeeman, who died in his sleep at his home in Oxfordshire on 13 February 2016. Sir Christopher, a renowned mathematician and communicator of mathematics, was Principal from 1988 to 1995. Professor

David Daniell, scholar of Shakespeare and of Tyndale, and Hertford honorary fellow since 1998, died on 1 June 2016. Paul Langford, Hertford alumnus (1964), Professor of History and former Rector of Lincoln, passed away on 27 July 2015. Our thoughts are with all their families. I too have to record the loss of my beloved wife Jane after a two-year and two-month fight with cancer; the support of the college community—fellows, staff, students and alumni—was phenomenal, and helped me through a very difficult period in my own life. Thanks to everyone, and for all those who helped make her Memorial so evocative. This was Hertford as a true community.

Hertford and Oxford have been around so long that our continued success seems pre-ordained—but nothing could be further from the truth. We need to continue to be innovators—in access, in our teaching and research, and in our relationships with the outside world. Tom Fletcher is right: the future belongs to those ready to reimagine themselves in the digital world. The more porous and open Hertford can be, the more Hertford can embrace new subject areas while supporting ones across the academic gamut, the more Hertford can show how we value using frontier knowledge to create new business models for social and commercial enterprise alike—the stronger we will be. And thus the stronger will be our teaching, our capacity to sustain the tutorial system and our research. We cannot do this alone. We will need to transform our infrastructure so it can embody the new, and invest in our students, tutorial fellows and researchers alike. That—to paraphrase Jane Austen—means we will need to look to you, dear alumni. Getting through the next few years is going to require us all to dig much deeper! Many thanks in anticipation—and for reading this far.

Will Hutton



HERTFORD HIGHLIGHTS



Discovering a Shakespeare First Folio

Emma Smith,
Professor of
Shakespeare Studies
and Tutorial Fellow in
English



When I heard via a third party that there was an uncatalogued copy of Shakespeare's First Folio on a Scottish island, I was, to put it mildly, sceptical. This is the most studied book in the world, and every one of the 234 extant copies which now reside in libraries from Auckland to Winchester College has been minutely analysed in a descriptive catalogue. It seemed inconceivable that one had escaped this scrutiny. Granted, until the end of the nineteenth century many aristocratic families in the UK owned a copy of this book. But as its value at auction rose due to wealthy American collectors entering the market, and as progressive taxation bit the disposable income of the landowning classes, most were sold in the decades either side of the First World War. There was no public record of the Marquesses of Bute

ever owning a First Folio, and the family collection of early play books had been sold to the National Library of Scotland without any mention of this star item.

So it was with the expectation of disappointing Bute that I visited the island in September 2015, as part of a small group of Oxford academics called in to help identify treasures in the library and to direct plans for increased public access to the collections of Mount Stuart house. The Boffins, as we were immediately named, were to spend two days going through amazing holdings including Jacobite material, Robert Burns first editions, detailed neoclassical architectural drawings by Robert Adam, and a contemporary manuscript account of Mary Queen of Scots' execution.

My book appeared in a box marked "Shakespeare First Folio 3 vols. London, 1623". Another unlikelihood. I knew from my research into copies of this book that no complete extant copy exists in multiple volumes. From its first anticipatory advertisement at the Frankfurt Book Fair in 1622, this book was always conceived as a single volume, divided into the generic sections of its title: "Mr William Shakespeares Comedies, Histories, & Tragedies". Breaking the news to the keen library staff was going to be difficult. Clearly this was either a later edition, or perhaps one of the many Victorian facsimiles which can only be distinguished from the original with some experience, and which tricked many naïve buyers in the Folio boom of the early twentieth century.

I began to revise my opinion, though, when I opened the first leather-bound volume, sitting in the cold exhibition room at Mount Stuart House. On the inside flyleaf, in the neat brown ink and handwriting of the late eighteenth century, was an inscription, "This copy of Shakspeare was inlaid by the late Mr Henderson of Covent Garden Theatre and the Mss part was supplied by him. In a will which he left unexecuted he had



Bute's First Folio in its cardboard box

bequeathed it to me and agreeable to that direction it was presented to me by his Widow this 3d Feby 1786." It was signed "Isaac Reed". My interest was immediately piqued. I knew from my research that a First Folio was sold as part of the editor Isaac Reed's estate in 1807, and, further, I knew from the auction listing that that copy had been rebound into three volumes in the eighteenth century. It had been assumed that that was the copy, now rebound as a single volume, in the Sir John Soane's Museum in London. But maybe that train of associations was incorrect.

It was Reed's inscription that first made me think that this might in fact be a genuine First Folio. More extensive checking on that first visit kept the possibility alive. The copy was clearly assembled from a variety of leaves from different originals, in a process that was known in the eighteenth-century book trade as "vampment". It was inlaid onto new paper, with hand-ruled borders to frame the text. It was divided into separate volumes for comedies, histories and tragedies, perhaps to make the book easier to manage and more portable—part of the movement of Shakespeare from the study to the fireside popularized by the smaller format of eighteenth-

century editions of the plays. They also probably included illustrations, as part of a contemporary fashion for extra-illustrated or so-called "grangerised" books (named after the nineteenth-century bibliographer Henry Granger). Prints of the locations of Shakespeare's plays, of views of Stratford or reproductions of his signature, and of the historical persons behind the plays, were sold for tipping (i.e. the pasting of individual pages) into editions, and it seems as if this may have been true of the Bute copy, which has lots of blank pages

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Isaac Reed
1786.

This Copy of Shakespeare was
inlaid by the late M^r. Henderson of
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part was supplied by him. In a Will
which he left unexecuted he had
bequeathed it to me and agreeable to
that direction it was presented to me
by his Widow this 3^d Feby 1786.

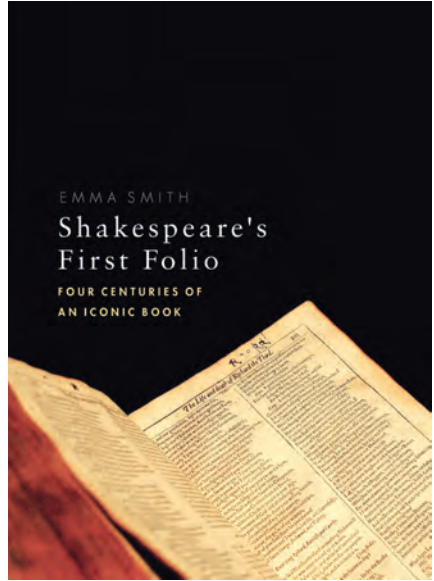
Isaac Reed



““ News of the discovery really put Bute on the map ””

bound into each volume. The binding looked to me to be from the twentieth century, although binding style, particularly for historic books, tends to be very retro, so it’s hard to tell. But it wasn’t, as far as I could tell with my second-best magnifying glass, a facsimile, or an obvious fake. I had looked at over a hundred copies of this book in libraries around the world, but always secure in the knowledge that the book presented to me was an authentic First Folio. Here in Bute, I felt the exhilarating flip of trying to draw on that experience to describe and assess the book in front of me.

I knew it would need proper authentication and that I didn’t have the technical tools to do that. A second, longer visit in January 2016 involved going through every page, checking for watermarks to align it with the known stock of paper used in the Jaggard’s printing workshop in the Barbican where the First Folio was produced in 1622-3. I produced a collation of variants to show which of the pages was in the corrected state, and checked that this was not a type facsimile or other reproduction. I noted down the manuscript marks, including some heavy annotation in *Romeo and Juliet* that seems to use the pages of the First Folio as a working copy for an updated edition (something that many eighteenth-century editors did). It was detailed work—not, actually, my best suit—and bone-chilling: the rudimentary temperature control of the library meant turning the fan heater on



full blast for short bursts every hour, and working through as the heat seeped away into the house’s gothic walls. The Mount Stuart staff were deeply kind and hospitable as I worked away.

The rest, I suppose, is history. It’s certain that Mount Stuart House has an original First Folio. Archival fossicking there revealed that it was part of the family collection at the end of the nineteenth century, and that it was rebound—to match the other three seventeenth-century Shakespeare Folios—in the 1930s. News of the discovery really put Bute on the map, and displaying their new find in the anniversary year has brought a lot of visitors to the island and to the extraordinary over-the-top mansion of Mount Stuart. And for me, this unexpected encounter with First Folio #235 has been a highlight of my career. One of my Master’s students this year made me a badge with the legend “I found a First Folio”. I haven’t worn it yet, but secretly I’d like to.



Irish History at Hertford: from Carroll to Foster

Roy Foster, Professor of Irish History



In the autumn of 1991, I came to Oxford as the first Carroll Professor of Irish History and took up a fellowship at Hertford, occupying a set of rooms in OB1 where I would stay for 25 years until my retirement this autumn. I moved in during September, when college was oddly empty and silent, apart from regular encounters with the Simpkin of the day. Stephanie West, then fellow librarian, lent me a copy of *The Nebuly Coat* by Hertford alumnus John Meade Falkner, and I still associate its strange and ghostly atmosphere with the uncertainty and oddness of my first nights in my bedroom beside the Bridge of Sighs.

A kind of unsureness hung over the whole venture. The Chair had just been endowed by the Carroll Foundation, an apparently philanthropic and scholarly organization set up by Gerald Carroll, the youthful CEO of the Carroll Group. The Group was an international holding company, embracing—among other interests—aeronautics and commercial property development. It had evolved

from a successful builders' firm with large interests in Dagenham and Liverpool, founded—I think—by Mr Carroll's grandfather. Mr Carroll had become interested in the family's Irish origins, and had set up the Foundation to explore these. Much interest and effort was being devoted to archaeological explorations in County Offaly, the ancient kingdom of Ely O'Carroll in the Irish midlands, which Mr Carroll believed had belonged to his family in pre-conquest days. The Foundation was headed by a distinguished retired civil servant, and employed a number of people in secretarial and research roles, as well as producing annual green-bound volumes recording its scholarly and philanthropic doings. These also stretched to Carroll connections in revolutionary America, a Carroll ancestor having signed the Declaration of Independence. Mr Carroll's interest in endowing a Chair of Irish History at Oxford was steered, and possibly nurtured, by Toby Barnard, then senior history fellow at Hertford, aided by the equally resourceful Angus Macintyre, senior History tutor at Magdalen—a Hertford alumnus, and elected Principal of the college shortly before his untimely death a few years later.

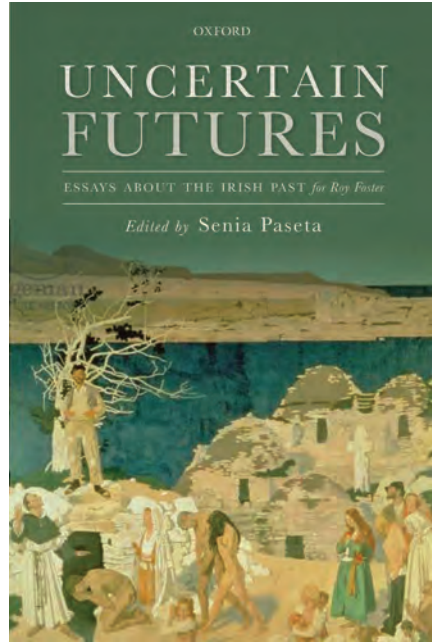
The Hertford-Irish connection had been established by Toby's own immensely distinguished scholarly career; it is expanded upon in a piece written by him for an earlier issue of this magazine (no. 92, 2012). Toby, Angus and a few others had slipped elements of Irish history into the syllabus where they could, but it was at best a niche interest in the Oxford history world. (Irish literature fared rather better, with scholars like John Kelly at St John's and Bernard O'Donoghue at Wadham, both of whom were stalwart friends and supporters of the Chair from the start.) But as the prospect of a new endowed Chair hove into view, Hertford was not the inevitable destination; St John's College also expressed an interest. Toby managed to enthuse



“ There were no interviews, as was then the practice for endowed chairs; the Board reviewed the claims of the fourteen applicants and I simply received the news of my election ”

Principal Zeeman with the idea, and a number of manoeuvres were skilfully undertaken to ensure the Chair went to Hertford, culminating in a lavish luncheon in the Lodgings, with wines carefully chosen by Toby. Mr Carroll, it turned out, drank nothing but Coca-Cola. Nothing daunted, Kenny Lewis (then under-butler) was sent sprinting around to the King's Arms to purchase some. Whether this was the clincher or not, Mr Carroll and the Foundation declared a preference for Hertford, and the deal was fixed. Toby has written a characteristic account of the campaign in the *festschrift* published to mark my retirement, illuminating an interesting chapter of college history.¹

The post was duly advertised. I was then Professor of Modern British History at Birkbeck College, University of London, an institution for whose ethos and students I had and retain an abiding admiration and affection; but the excitement of specializing in Irish history, and occupying the first (and still the only) endowed Chair in the subject in Britain, was irresistible. Oxford also held a special attraction. Early in my career I had attended my mentor F. S. L. Lyons' legendary 1978 Ford Lectures in the Examination Schools, published as



Culture and Anarchy in Ireland, 1890-1939 (Oxford, 1979). I had subsequently spent a happy year as Alistair Horne Fellow at St Antony's and had many friends there. In the fullness of time, the Board of Electors met (representing the Carroll Foundation, Hertford College, a number of Oxford History Faculty nominees, and the requisite external experts). There were no interviews, as was then the practice for endowed chairs; the Board reviewed the claims of the fourteen applicants and I simply received the news of my election. I was then inducted—with Toby as invaluable *cicerone*—into the Oxford (and Hertford) world.

There were also a number of meetings with Mr Carroll and his Foundation. The Foundation's offices, behind Buckingham Palace Mews, contained many Irish artefacts, pictures and books, and an impressive full-length equestrian portrait of Mr Carroll. There were also glass-cased items of prehistoric gold jewellery,



excavated on Carroll lands, which Toby wickedly suggested should be made available to the wife of the Carroll Professor, for use on state occasions. Mr Carroll was more interested in ensuring that the history of his family, and the period of their supremacy in the kingdom of Ely O'Carroll, should be emphasized in the Oxford curriculum. My explanation that I was a modernist was not at first acceptable, and he suggested, in a colourful metaphor, that I should "move the hosepipe over a bit". With Toby's aid, a more welcome course was adopted: that the Carroll Foundation should endow an annual Carroll Lecture at Hertford, as well as a recurring symposium, to concentrate upon Ireland both in the late medieval and early modern periods.

This duly happened, and for the first few years of my tenure the Carroll Lecture and ensuing dinner constituted a notable event in the Hertford calendar. Mr Carroll liked to have various luminaries invited, including the Earl and Countess of Rosse, now the resident grandees of what was once the kingdom of Ely O'Carroll. At

the first Carroll Lecture, Lady Rosse left a jewel case containing heirloom rubies and diamonds below her chair in the exam schools, mercifully retrieved by the Carroll Professor in time for the gala dinner. The Carroll Lectures, while they lasted, also occasioned some legendary after-hours conviviality. In these early years, the Carroll Foundation also laid on a number of entertainments, where beneficiaries of the Foundation were expected to attend, ranging from Farnborough Air Show to Newmarket races (where Mr Carroll owned a stud, which surprisingly did not contain race-horses—his taste running instead to racing-cars of various vintages).

These glamorous occasions were, however, not the main part of my duties, which involved introducing Irish history into the Oxford curriculum. The tasks of a statutory professor were still conceived to be writing books and supervising graduates, both of which I was happy to do; but I also felt that the undergraduate syllabus needed an Irish history component, which could serve as a route into graduate study for potential doctoral students—as proved to be the case. I gave survey lectures on Ireland under the Union, introduced a Further Subject on nationalism, politics and culture in Ireland, and began to build up a graduate school through a seminar on Irish History, which ran throughout the year—meeting in Hertford's Old Library, and scheduled to coincide with a Guest Night at high table. On 1 December 1994, I delivered an inaugural lecture in the Examination Schools, dealing with narratives of nationalism, called "The Story of Ireland".² It also reflected the research work on which I was now fully engaged, the authorized biography of W. B. Yeats, which appeared in two volumes in 1997 and 2003. I was also elected to the English Faculty, and taught a course on literary biography with Hermione Lee and Lucy Newlyn. And there were a number of conferences and symposia on Irish history,

“Hertford’s Irish connections were further cemented by the elections to Honorary Fellowship of Mary Robinson (while President of Ireland) and Paul Muldoon (while Oxford Professor of Poetry)”



Roy Foster and
Tom Paulin

often based at Hertford, which spread the word further.

Hertford's Irish connections were further cemented by the elections to honorary fellowship of Mary Robinson (while President of Ireland) and Paul Muldoon (while Oxford Professor of Poetry), and the successive appointments of Tom Paulin and David Dwan as G. M. Young Lecturer. A network of Irish history began to form on a wider basis, helped by termly "Irish Lunches" at Hertford, an idea suggested by Maurice Keen of Balliol. The introduction of Irish history into the Oxford world received a boost from another source in the mid-1990s. A contact in the Irish Embassy alerted me to the fact that a charitable trust benefiting the relics of Irishmen serving in the British forces before independence was about to be broken up, having served its purpose, and the Irish Government wanted its assets to be directed towards projects helping Anglo-Irish relations. I applied for money from this one-off source, and

with it endowed a one-year postdoctoral scholarship, to be held at Hertford. More money was raised from charitable trusts, and some extra Irish Government sources; and the Irish Government Senior Scholarship has brought a series of young scholars to Oxford over the years, often serving as the first step in a distinguished career. Two early holders of the post, Senia Pasetta and Marc Mulholland, went on to become History tutors at St Hugh's and St Catherine's, respectively, and have added inestimably to the strength of Irish history in the Faculty. With their advent, further courses on Irish history were introduced, notably a heavily-subscribed Special Subject on the Northern Troubles. In 2012, I delivered the Ford Lectures, and revisited the territory opened up by Lyons in the same lecture-room 34 years previously.³ By then, as I had hoped, a graduate school had developed: in the 25 years of my tenure, I have supervised 34 doctoral theses, nineteen of which have become impressive books, and



“It was a particular pleasure that the last two Hertford undergraduates to take the course with me, Aaron Pooni and Esmé Stout (2013), both achieved distinguished First Class marks in the 2016 final examination”

seen graduates of Oxford’s Irish history enterprise go on to notable academic appointments in Britain, Ireland, the USA and Australia. The undergraduate Further Subject usually attracted a couple of Hertford undergraduates, and tutoring them brought me closer to the lively world of undergraduate History in college—as did the annual interviewing round. It was a particular pleasure that the last two Hertford undergraduates to take the course with me, Aaron Pooni and Esmé Stout (2013), both achieved distinguished first class marks in the 2016 final examination.

None of these endeavours could have been undertaken without the original donation supplied by the Carroll Foundation. As first conceived, it included a fund for secretarial help, bringing first Valerie Kemp and then Jules Iddon to Hertford, where their stellar abilities, utter commitment and unflinching good humour made my organizational life much easier. Unfortunately, by 2000, the Carroll Group had got into difficulties, and the Foundation was wound up. By then the momentum was well established, but further fundraising was necessary—which bore fruit last year, when the Chair was re-funded by a generous donor, whose only stipulation was that it be renamed. It will continue as the Foster Chair, filled in the first instance by Ian McBride, whom I have known since his days as a brilliant graduate student in London, and who is himself an Oxford graduate. His expertise includes scintillating work on the Irish eighteenth

century, the Penal Laws against Catholics, Presbyterian radicalism, the recent and current travails of Northern Ireland—and the political writings of Jonathan Swift, thus rounding out the Hertford connection in a uniquely satisfying way.

Ian’s appointment and my retirement complete a kind of circle, which leaves the sadness I feel at relinquishing what has been a fulfilling, creative and productive quarter-century, teaching, writing, thinking and talking about Irish history in OB1, the Old Library, and around convivial lunch-tables in the Lower SCR and (latterly) the Old Lodgings. I have appreciated more than I can say the support extended to me in Hertford, and the fair wind given to Irish enterprises here, from the Zeeman dispensation through to Will Hutton’s dynamic Principalship. Elizabeth Bowen, an Irish novelist much admired by Toby Barnard as well as myself, declared that she wished the English would think about Irish history a good deal more, and the Irish a good deal less (meaning, I think, with less self-regard). If establishing Irish history in Oxford has helped to advance this desideratum, I will retire happy—and enduringly grateful to the college which adopted the Chair and myself, and made us both so welcome.

1. Toby Barnard, ‘Roy Foster and Oxford’ in Senia Pasetta (ed.), *Uncertain Futures: essays on the Irish past for Roy Foster* (Oxford University Press, 2016), pp. 41-48.
2. Published as a pamphlet by the Clarendon Press: *The Story of Ireland: an inaugural lecture delivered before the University of Oxford on 1 December 1994, by R. F. Foster, Carroll Professor of Irish History*. A slightly expanded version appeared in R. F. Foster, *The Irish History: telling tales and making it up in Ireland* (Allen Lane, 2001), pp. 1-22.
3. They were published, in much expanded form, as *Vivid Faces: the revolutionary generation in Ireland, 1890-1923* (Allen Lane, 2014).



HERTFORD
RESEARCH



Artificial intelligence: past, present, and future

Mike Wooldridge,
Professor of
Computing Science
and Senior Research
Fellow



In the summer of 1956, a young American researcher called John McCarthy organized a two-month summer school at Dartmouth College in New Hampshire. The school proposed to investigate the problem of getting computer programmes to be able to do things which, at that time, seemed to require human brains: learning, problem solving, and the like. McCarthy famously predicted that “a significant advance can be made [...] if a carefully selected group of scientists work on it together for a summer”. By the end of the summer, they had made no real progress, but McCarthy had coined a term for what they were trying to achieve, and a new academic discipline was formed: *artificial intelligence*.

Ever since the now-famous Dartmouth conference, artificial intelligence (AI) has remained a central research topic

in computer science. Throughout the 1960s and early 1970s, researchers demonstrated that it was possible to build programmes that could undertake simple forms of learning, planning, problem-solving, and game-playing, demonstrating that such behaviours are, at least in principle, achievable by machines. The then-dominant paradigm for tackling such problems is known as *symbolic AI*. Symbolic AI tries to capture intelligence as *reasoning*. In its purest expression, reasoning is viewed as a purely logical process, reducing the decision-making processes of an intelligent system to logical reasoning. For example, the task of deciding what move to make in a game of chess reduces to a logical proof that a particular move is the best one to make. Symbolic AI had some notable successes. For example, *expert systems* aim to capture the specialized knowledge of an expert in some problem domain in the form of logical rules. Expert systems have many useful applications, for example in fault diagnosis and medicine. For researchers, the theory of symbolic AI was very attractive, partly because it is so close to logical reasoning, and partly because it is “transparent”—if we want to understand *why* a symbolic system did something, we can simply look at its reasoning.

However, attractive though the symbolic paradigm seemed in principle, it became clear, throughout the 1970s and 1980s, that symbolic approaches were not likely to scale to the more general problems of building intelligent systems. For one thing, the role of explicit reasoning in everyday human decision-making and action is not well understood. Also, researchers found that, for many tasks, symbolic reasoning approaches were simply inappropriate: when we drive a car, how often do we use logical reasoning, or anything like it?

These and other fundamental problems led some researchers to reject the symbolic paradigm, and to look for fundamentally new approaches, of which several emerged.



One idea was to try to *artificially evolve* intelligent systems. Essentially, the idea is that the one example of naturally intelligent systems that we have to hand (the human race) acquired its intelligence as a result of millions of years of evolution, in which, over time, blind evolutionary processes led to *homo sapiens*. In *evolutionary computing*, the idea is to use computers to simulate evolutionary processes in order to evolve intelligent systems. It's a neat idea, and it works very well on certain types of problems, but it hasn't provided a route to general AI yet.

Another idea is *neural AI*, which starts by attempting to *model the brain*. The key point here is that computers are essentially monolithic information processing systems: a typical computer will have a processor that contains probably only a couple of highly powered processing units (CPUs), while, in contrast, the brain is made up of about 100 billion very simple processing systems (neurons) operating in parallel, and organized into a highly complex network. Put crudely, neural AI tries to construct *neural nets* that model brain-like processing. Although the idea of neural AI arose very early in the history of AI, early results on neural nets were not encouraging, and the field languished until the mid-1980s, when real progress began to be made. This century, however, has seen an explosion of research in this area, and much of the current interest in AI arises from the huge progress that has

been made in neural nets over the past ten years.

There seem to be three reasons why neural net research has suddenly started to deliver such impressive results over the past decade:

- First, there were fundamental advances in the algorithms for handling neural nets, made by Geoff Hinton and his colleagues in Toronto about a decade ago. This led to a new area called *deep learning*, which is where all the AI action is currently. Simply put, deep learning allows much more complex neural structures to be used than was possible previously, making it possible for them to handle much more challenging tasks.
- It turns out that to make neural nets work, you need to *train them* with lots, and lots, and lots of example data. And data is one thing we have no shortage of in 2016.
- Finally, it turns out that training requires *lots* of computer processing power—and again, this is one thing we have in abundance right now.

I should put my cards on the table, and say that I truly believe, as an AI researcher of 25 years standing, that the deep learning systems I have seen over the past two years represent a real breakthrough. They aren't just hype. Things have become possible in the past few years that would have been unthinkable a decade ago, and we have only just begun

“ Throughout the 1960s and early 1970s, researchers demonstrated that it was possible to build programs that could undertake simple forms of learning, planning, problem solving, and game playing ”



“ There is no sign of consciousness in these programmes—and my view is that if we get to the stage where we are developing conscious programmes, then we will have plenty of advance warning ”

to understand what we can do with this incredible new capability. In one of the most famous demonstrations of deep learning research, Google DeepMind (the London-based AI research arm of Google) demonstrated a system that taught itself to play 49 video games (specifically, games for the 1980s Atari video game console). In the end, the programme could play many of these games better than a human could play them; learning a new game required about eight hours of time on a standard desktop computer. Crucially, the programme was unsupervised: it taught itself to play, using as input only the video feed from the game, and information about how well or badly it was doing. *Just by repeatedly playing and receiving feedback about how well or badly it was doing, the programme delivered an astonishing performance.*

So where next? Some pundits have made very public statements expressing concern about how AI might affect society, even claiming that AI may pose an existential risk to the human race itself.

What happens, the argument crudely goes, when we have constructed systems that are smarter than we are? I don't see any immediate cause for concern here, for several reasons. First, impressive though the capabilities demonstrated so far are, they are a long way from human-level intelligence—they are mainly focussed on very specific and narrow tasks, which require significant capabilities in their own right, but aren't in any sense general purpose. There is no sign of consciousness in these programmes—and my view is that if we get to the stage where we are developing conscious programmes, then we will have plenty of advance warning. The “Skynet” scenario from the *Terminator* films, where a machine becomes sentient just hours after being switched on, makes for a thrilling storyline, but doesn't seem likely. (Although, for the record, I don't recommend giving control of the world's nuclear arsenal to an AI programme). One issue with deep learning seems to be that it is hard to build programmes that can do long-term reasoning—tasks that require thinking about the future.

So, how *will* these AI technologies affect us? I think the exciting thing is this: *intelligence is going to be embedded in everything we build.* This is going to change society fundamentally. I don't think these changes imply any obvious existential risk for the human race, but I do think that that we need to think about how society will respond to these changes. Perhaps the most obvious and immediate cause for concern is that AI techniques are going to make a huge number of workers redundant across the globe, just as the automation of factory production lines did in the 1970s and 80s. This time, though, the complexity of roles being automated will be much higher—the effects of the changes will not be limited to unskilled labour.



Visions of reform in Carolingian monasteries

Dr Ingrid Rembold,
Junior Research Fellow
in History



Exactly 1,200 years ago, in 816, Emperor Louis the Pious, ruler of the Carolingian Empire (stretching across modern-day France, Belgium, the Netherlands, Germany, Switzerland, Austria, and Italy), convened a council of bishops, abbots, clerics, and monks at his palace in Aachen. This council not only produced a new set of written rules for the clergy, the *Institutes for Canons*, but further advocated a strict division between canonical (i.e. clerical) and monastic forms of life; those who opted for the latter were to observe the council's interpretation of the *Benedictine Rule*, a strict set of stipulations for the behaviour and liturgy of monks set down by Benedict of Nursia in the sixth century. Naturally, this stark choice created issues for monasteries with their own ancient observances—observances which differed from the new, imperially-promulgated norms. Monasteries across Western Europe were confronted by what one could term the Sheryl Sandberg/

Dawn Forster dilemma: lean in or lean out. Benedictine or canonical: there was no middle ground.

The 816 council was the first in a series: two further reform councils, in 817 and 818/819, followed closely on its heels. These councils, taken in aggregate, have long been regarded as the culmination of Carolingian monastic policy, to which all pre-816 policy ineluctably led, and from which all further policy followed. They have, in effect, been taken to signal the fundamental transformation of the most significant institutions in Western Europe. And, certainly, monastic reforms mattered. They led to a restructuring of authority both within, and over, monasteries; they affected the rhythms by which monks lived their lives, from their liturgical observances to their manual labour; they impacted monasteries' economic underpinnings and practices of land management; and, finally, they changed monasteries' relationships with the laity, who interacted with monasteries as patrons, tenants, students, or clients, and who worshipped at monastic sites in common devotion.

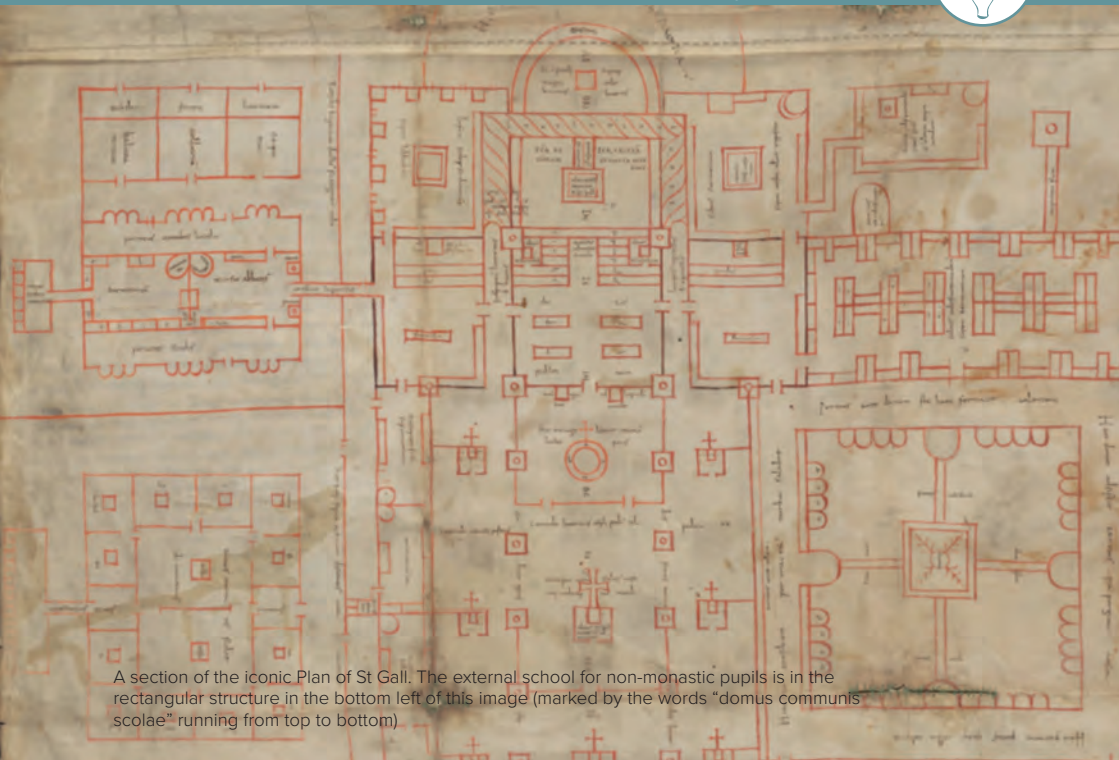
Yet, crucially, reform was not monolithic. While the Aachen reform councils represent the most comprehensive and extensive monastic reforms undertaken in the Carolingian era, they were not the last word on the subject. Even those who subscribed to the vision of the Aachen reform councils did so in a variety of ways. The legislation promulgated in 816-819 was itself the product of public debate; the issues raised on such occasions continued to be discussed and contested long after the councils had reached their official decisions. One abbot attending the 816 proceedings wrote to his monks to keep them abreast of the developments: he reviewed the various decisions reached, and offered commentary on which ones were worth trying to implement in his monasteries. Elsewhere, others likewise adopted a



Ingrid in front of a late antique sarcophagus

“While some monasteries eagerly (if selectively) bought into the monastic vision advanced by these councils, others simply appropriated their language”

pick-and-choose approach to the conciliar decisions. The so-called Plan of Saint Gall, a “paradigmatic” ground plan of an ideal monastery, has long been interpreted as the architectural realization of the Aachen reform programme. Yet, various parts of the ground plan—most notably the inclusion of an external school for non-monastic pupils—actually went against the express instructions of the Aachen reforms. Communities, even those which were reformed along the lines of the Aachen councils, did not observe their mandates to the letter. Moreover, while some monasteries eagerly (if selectively) bought into the monastic vision advanced by these councils, others simply appropriated their language, articulating pre-reform practices within the idiom of the Benedictine Rule. It is often impossible



A section of the iconic Plan of St Gall. The external school for non-monastic pupils is in the rectangular structure in the bottom left of this image (marked by the words “domus communis scolae” running from top to bottom).

to tell the difference between the two.

Scholars have long attempted to harmonize these divergent experiences of reform with the mandates of the 816-819 councils. Such expectations of a coherent, top-down “reform agenda” have had the effect of homogenizing Carolingian reforms: they produce a selective, and ultimately teleological narrative. In my current research—undertaken with the generous support of Hertford, where I currently hold a junior research fellowship—I am seeking to change this basic account.

Junior research fellowships (or JRFs, as they’re commonly called) give early career academics the time and freedom to develop their next, big project before the demands of a permanent job set in. Essentially, it’s a three-year-long

research post: there are no teaching or administrative duties attached (although JRFs can take these on to a limited degree, insofar as it will aid career development). In my case, it’s giving me the opportunity to complete a book-length study of my PhD dissertation, publish articles relating to my past and current research, expand my teaching portfolio, and, most importantly, pursue a new and exciting research agenda—and all in an extremely welcoming and supportive research environment.

In my current project—conducted, thanks to the availability of printed sources, largely in the reading rooms of the Bodleian, or in my (conveniently adjacent) Hertford office—I’m attempting to advance a more diverse, bottom-up account of Carolingian monastic reform. Instead of



“Those who had lived as canons were condemned as apostates and assigned penance”

taking secular and ecclesiastical legislation as my starting point, I'm combing through the local monastic records for signs of monastic discontinuity—or reemphasized “continuity” and local traditions—which were the hallmarks of reform. In so doing, I hope to draw attention to the different, competing visions of reform which were operative in the Carolingian world, and the ways in which communities drew upon and reshaped their histories in order to justify, even to Carolingian rulers themselves, their continuing, non-normative observances.

Indeed, some monasteries subscribed to a different vision of reform altogether. Take the example of Saint Denis, in the neighbourhood of Paris now best known for hosting the French national football stadium. An old and venerable monastery, situated on a thriving cult site, its monks did not observe either the Benedictine or canonical rule. In 817, the monastery was reformed in accordance with the Aachen councils. One of the leading reformers visited the community and restructured it as a canonical house; those who wished to follow the Benedictine Rule were relocated to a dependency of the monastery. A mere twelve years later, a new reform was undertaken at Saint Denis, and the earlier reform reversed. Those who had lived as canons were condemned as apostates and assigned penance; the community reverted to its pre-817 monastic (yet non-

Benedictine) observance. Although Saint Denis became Benedictine three years later, following yet another council, the community's observance of the Rule differed significantly from that set out in the Aachen reform councils. Specifically, the monks followed their traditional liturgy of perpetual psalmody, in which psalms were sung continuously, in shifts, throughout the night and day. This difference in liturgical practice was accentuated and given a significant role in the community's self-definition; the monks produced a narrative history, the Deeds of Dagobert, to justify this distinctive practice by placing its origins in the institution's deep past.

Similar trajectories can be seen elsewhere. Monasteries pursued different visions of reform and substantiated their choices through the construction and deployment of their own, selective histories. Local traditions are often viewed as the antithesis of reform. Yet they were neither passively received nor unchanging: on the contrary, they were actively constructed, often in support of reform agendas—if not *the* reform agenda of the Aachen councils.

In attempting to reconstruct a broader range of Carolingian monastic reforms, then, I also seek to reevaluate Carolingian historical writing, and, in particular, attitudes towards the Carolingian's predecessors, the Merovingians. Much attention has been paid to how Carolingian authors attempted to discredit this earlier dynasty. Yet in these local, monastic productions, a considerably more positive image of Merovingian kingship emerges. These texts were produced to garner the support and patronage of Carolingian kings: they therefore suggest a more complex and multi-faceted engagement with the Merovingian past than has often been acknowledged.



A short guide to meningitis vaccines

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Meningitis vaccines are currently at the heart of government policy and national debate. In 2015, two novel vaccines were introduced in the UK, targeting the commonest meningitis germ, *Neisseria meningitidis*, otherwise known as the meningococcus. One of these vaccines is used against serogroups A, C, W, and Y (MenA, MenC, MenW, and MenY). This vaccine was introduced in response to an alarming increase in severe MenW disease, especially in teenagers. The other vaccine, called Bexsero® and marketed by GSK, is designed to combat serogroup B meningococci, or MenB—currently the most common cause of meningococcal disease in infants and young children. The time it took to introduce the MenB vaccine into the infant immunization schedule, while cost-effectiveness calculations and negotiations on price took place, was controversial. Bexsero® was finally

adopted in September 2015 as a routine vaccine for all infants in the UK, to be given at eight weeks, sixteen weeks, and one year of age. Following the introduction, there was a social media campaign and a parliamentary petition with 823,346 signatures calling for a wider age group to be immunized.

Martin Maiden has been working in this area for 28 years, starting at the National Institute for Biological Standards and Control in 1988. He moved to Oxford in 1997 and became the Professor of Molecular Epidemiology and a fellow of Hertford College in 2004. He is currently Hertford's tutor for graduates as well as tutorial fellow in Biology. To put the history and controversies surrounding meningitis vaccines into context and explain the UK policy decisions that have been made, he discusses the biology of the meningococcus bacterium, the disease it causes, and how meningitis prevention is achieved through vaccination.

"Meningitis" has many causes, but the term is most frequently used to refer to meningococcal disease, a very severe condition, which has been documented since 1805, when a likely outbreak occurred in Geneva, Switzerland, and was described by the neurologist Gaspard Vieusseux. Changing rates of meningococcal disease in the UK have been recorded for more than a century, with high incidence in the two world wars and during the depression of the 1930s. For largely unknown reasons, there was a prolonged increase in the disease in the UK from the mid-1980s until the early 2000s. Such "hyperendemic" outbreaks happen occasionally throughout the world, but this was particularly intense and long-lasting. Meningococcal disease primarily affects young children, especially those under one year of age, but also causes disease in young adults and has been a particular problem in military recruits. Military outbreaks led to early advances in meningococcal disease research.



“Those whose blood could kill the bacterium were protected; those whose blood could not were susceptible to the disease”

One hundred years ago, during the First World War, Captain J.A. Glover of the Royal Army Medical Corps, investigated outbreaks of meningococcal disease in the Guards' Barracks in Caterham in Surrey. He demonstrated that outbreaks of the disease were associated with increases in the presence of the meningococcus bacterium in healthy soldiers' throats ("carriage"). This is one of the many conundrums of this notorious disease-causing bacterium: for most of the time it is a harmless inhabitant of the throats of healthy people. Indeed, causing disease and killing the host is not at all in the bacterium's interest. Captain Glover showed that reducing the carriage and transmission of the bacteria among healthy soldiers, by reducing overcrowding in sleeping quarters, apparently reduced disease epidemics in the military.

Although this "spacing out" seemed to work for Captain Glover, it was not a complete solution, and in the Second World War, epidemics in the military became a problem again. This was addressed with the newly developed sulphonamide drugs, which killed the bacteria in the throat. Giving these drugs to new recruits on arrival solved the problem by preventing the carriage and spread of the meningococcus. By the time of the Vietnam War in the late 1960s, however, meningococci resistant to these antimicrobials had emerged and there

were high profile disease outbreaks in US Army recruit camps. This led to renewed efforts to develop vaccines, and a group of US Army doctors working at the Walter Reed Army Institute of Research, Emil Gotschlich, Irving Goldschneider, and Malcolm Artenstein, conducted a series of ground-breaking experiments, which demonstrated that it was possible to measure the ability of people's blood to kill meningococci. Those whose blood could kill the bacterium were protected; those whose blood could not were susceptible to the disease. This property of killing was specific to particular meningococcal "serogroups". We now know that there are twelve such serogroups, called A, B, C, E, H, I, K, L, W, X, Y, Z, but only six of these (A, B, C, W, X, Y) regularly cause the disease in people. These serogroups correspond to sugar-based "polysaccharide" coats, or capsules, with which the bacteria cover themselves, protecting them from the human immune response. Gotschlich, Goldschneider, and Artenstein demonstrated that purified capsular polysaccharides could be used as components of vaccines, which conferred the ability to kill meningococci of the corresponding serogroup to the recipient, thereby preventing disease.

These first-generation meningococcal polysaccharide vaccines were very effective at preventing military outbreaks and in quenching epidemics once they had been identified, but they did not work in small children and only gave relatively weak, short-term protection in adults. In addition, they did not prevent the carriage and spread of the bacteria among healthy people and were therefore unsuitable for inclusion in national immunization campaigns. These properties also made them unsuitable for use in the "Meningitis Belt" of sub-Saharan Africa, which has historically suffered very large periodic outbreaks of mostly MenA disease since the early 1900s. The next step forward in meningitis vaccines came with the work



The UKMenCar4 consortium at the end of a study meeting held in the Oxford Martin School and Hertford College

of Harold Jennings and John Robbins, who independently demonstrated that the vaccine potential of bacterial polysaccharides was dramatically improved by chemically linking, or “conjugating”, them with protein-based vaccine components, such as the tetanus toxoid commonly used in infant vaccines. These conjugate vaccines gave good, long-lasting immunity to adults and improved performance in infants.

The Meningococcal C Conjugate vaccines were being developed for market towards the end of the 1990s, a time of increased MenC disease in the UK, with outbreaks in both infants and young adults at schools and universities. In February 1999, the UK Department of Health took the decision to accelerate the introduction of these vaccines, with a campaign to immunize the whole population up to the

age of seventeen years (later extended to 24 years) within two years of introduction. This proved to be highly successful, with a very rapid decline in disease incidence. At the time of introduction, it was strongly suspected, but not known, that the new vaccine would prevent the carriage of the group C meningococcus, thereby reducing transmission of the organism. This has a potentially very powerful effect, called “herd immunity”, which stops the bacterium from spreading and protects the whole population, whether immunized or not. This beneficial effect carries the risk that it may result in the evolution of variants of the bacterium that escape the immunization by the acquisition of a different polysaccharide capsule.

Together with James Stuart of the Public Health Laboratory Service, I led the UK Meningococcal Carriage study



(UKMenCar) study (1999-2001), to explore the effects of the serogroup C vaccine on carriage. The aims were to establish (i) if the vaccine introduction affected carriage in healthy individuals, and (ii) if so, whether “vaccine escape variants” emerged. We showed that the new vaccines were very effective in reducing carriage and generating herd immunity. This was just as well, as it subsequently emerged that the first immunization schedule for these vaccines in infants (at two, three and four months) only protected them in the short term. We further showed that the UK immunization programme worked so well because it included older teenagers. Most transmission occurred in this age group, due their social behaviour, especially pub and clubs attendance, smoking, and kissing. Fortunately, ongoing disease surveillance showed no evidence of the emergence of variants that escaped the effects of the vaccine.

One of the consequences of the success of these vaccines in the UK was an initiative, the Meningitis Vaccine Project (MVP), to develop a similar conjugate MenA polysaccharide vaccine for use in the Meningitis Belt in Africa. Led by Marc LaForce, this collaborative project was funded by the Bill and Melinda Gates Foundation in 2001 and led to the introduction of the “MenAfriVac” vaccine across the belt within ten years. This was manufactured with an innovative North-South partnership to keep the costs to the sustainable level of less than 1 US\$ per dose. Drawing on the experience of the UKMenCar studies, everyone up to the age of 29 was immunized, to ensure that the likely effect on carriage would generate herd immunity. My group participated in a further, very large, carriage study, MenAfriCar, in seven countries across the belt, in a project led by Brian Greenwood of the London School of Hygiene and Tropical Medicine. This study confirmed a similar herd immunity effect to that observed in the UKMenCar studies.

These results showed that conjugate polysaccharide vaccines are close to ideal solutions to the problem of meningococcal disease. They generate a much better immune response than natural infection and not only protect people directly by stimulating their immune systems, but also provide indirect protection through herd immunity. Their effects persist for many years and novel MenACYWX vaccines provide the prospect of eliminating the disease caused by these serogroups. Indeed, in response to an alarming increase in MenW disease, the UK implemented an immunization campaign in teenagers with MenACWY vaccine in 2015. This implementation was adopted partially as a consequence of genomic analyses that my group conducted in collaboration with Ray Borrow at Public Health England in 2014. These showed that the particular MenW strain currently in the UK was a very close relative of a strain causing large epidemics in South America, and was also related to the MenC strain that caused the UK outbreaks at the end of the 1990s.

So what about MenB, which most commonly affects babies and young children in the UK? The problem is that no-one has been able to make a good vaccine from the serogroup B polysaccharide and, because it is identical in chemical structure to a molecule found on the surface of human foetal neural cells, there has been a reluctance to try

“The Maiden Lab continues to have an active research programme that seeks to understand meningococcal disease and its prevention”



Hertford students David Heathcote and Aaron King perform after the Geoffrey Warnock Society Lunch



too hard. This has led to the search for alternative vaccine components using the “outer membrane” of the bacterium and its protein components, with successful vaccines developed to stop particular epidemics in Norway, Cuba and New Zealand. The problem with these antigens is that they are highly diverse among meningococci and these vaccines normally protect against relatively few meningococci. Two separate vaccine development programmes, one in Siena, Italy, led by Rino Rappuloi, and one in New York, USA, led by Gary Zlotnick, identified the same novel vaccine candidate, factor H binding protein, or fHbp, which it was hoped would overcome these problems. Rappuloi’s team used a genomics-based approach, which he called “reverse genomics”, whilst the Zlotnick group used more conventional methods of vaccine development. These led to two products: Bexsero® (GSK, based on the work of the Siena group) and TruMenba® (Pfizer, based on the US work).

Bexsero® was the first vaccine to be produced commercially and is the one that has been approved for use in Europe and implemented in the UK, but there are some uncertainties surrounding both of these vaccines. Two are especially important: first, how broad is the coverage of the vaccine? And, second, will it reduce the carriage of meningococci in the throats of healthy people and therefore generate herd immunity? Given the declining rates of the disease and that both vaccines are relatively expensive, there was debate over whether the introduction of Bexsero® would be cost-effective. Ultimately, the UK government’s advisory body, the Joint Committee on Vaccination and Immunization, decided that, in the absence of evidence, Bexsero® would reduce carriage and therefore generate herd immunity. Cost-effectiveness could only be justified for infants (those under one year of age). This recommendation was implemented in September 2015.

Unfortunately, this cannot protect other individuals, so cases will still occur in older age groups, where it is not considered to be cost-effective to immunize. If an effect on carriage could be demonstrated in teenagers, where most of the carriage and transmission occurs, this might change the cost-effectiveness calculations.

In conclusion, the introduction of conjugate polysaccharide vaccines has been an unqualified success in combatting meningococcal disease worldwide. The vaccines are highly cost-effective, safe, and easy to use. Unfortunately, it seems unlikely that there will be an equivalent vaccine against serogroup B meningococci. The protein-based “MenB substitute” vaccines will impact disease, but it remains uncertain how broad their coverage will be or if they will affect carriage, thereby providing the all-important herd immunity. However, the introduction of the Bexsero® vaccine in the UK will provide invaluable information on coverage and hopefully the likely impact on carriage will be established. In this case time will tell, but the history of meningococcal disease and its prevention by vaccination indicate that there are likely to be further unexpected results as more is learned about this complex and enigmatic bacterium.

The Maiden Lab continues to have an active research programme that seeks to understand meningococcal disease and its prevention, using a multidisciplinary approach that includes genomic, evolutionary, epidemiological, and functional studies. The research has many Hertford connections in addition to Martin: Odile Harrison, currently a stipendiary lecturer, is a senior researcher in the group; group members Carina Brehony (2006), Holly Sanders (2004), Dorothea Hill (2011) and Holly Bratcher (2011) all completed their DPhils at Hertford; and several Hertford undergraduates have undertaken work experience or Final Honour School projects on this topic, including Stephanie Dyball (2005), Sarah Earle (2010), Marianne Clemence (2012), and Lily Goodyer Sait (2013).



Governments and the law

Matthew Windsor,
Junior Research Fellow
in Law



In July 2016, the beleaguered Chilcot Inquiry released its controversial report concerning Britain's involvement in Iraq. Although it did not directly address issues of legality, the report concluded that the circumstances giving rise to the view that there was a legal basis for military intervention were "far from satisfactory". This eagerly awaited conclusion vindicated Elizabeth Wilmshurst, the legal adviser who resigned her post at the UK Foreign and Commonwealth Office because she had no doubt that the war was unlawful.

As a junior research fellow in Law at Hertford College, my research directly concerns the ethics of government lawyering in the context of public international law and foreign policy. My current major project is to convert my doctoral thesis, undertaken at the University of Cambridge, into a book. The book will closely analyse the professional responsibilities of the government legal adviser, and the strategic challenges and ethical quandaries that legal advisers

face when they speak law to power. Legal advisers have a crucial role to play in fostering state compliance with international law and in legitimating foreign policy. They help ensure the integrity of executive government and assist in achieving the ideals of the rule of law and separation of powers. However, history reveals that the legal adviser has often acted as a "hired gun", cloaking predetermined government policies with instrumentalist legal justifications.

My book will provide an original conceptual framework for evaluating and critiquing government advisory practice. Given the secrecy of many foreign ministries, most accounts of the role of legal advisers are penned by current or former officials. My research is a sustained critical reaction to the way in which such officials have policed the discourse and privileged existing professional routines. In order to interrogate the values underlying government advisory practice, I draw on philosophical legal ethics. In the book, I consider a range of issues pertaining to government legal ethics, including:

- How legal advisers should resolve their competing allegiances—for example, should they be advancing the particular interests of the government of the day, the national interest more generally, or simply seeking to uphold international law? This raises broader questions of representation, sovereignty and the national interest.
- The extent to which the adviser's professional independence can be undermined by the constraints of bureaucratic structure and organizational culture.
- The way that legal advisers disavow responsibility for policy decisions based on a division of labour within government that restricts the scope of moral attention.

In my engagement with the complexities of international professional responsibility,



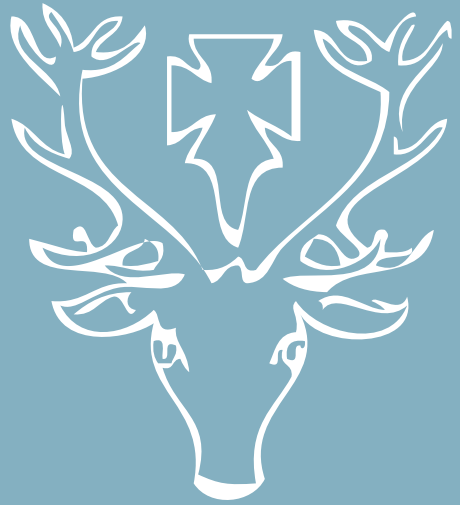
I advance a principle of interpretive responsibility to underpin the legal adviser's invocation and construction of international law. (This builds on a book I co-edited for Oxford University Press in 2015, which critically interrogated disciplinary orthodoxies concerning interpretation in international law). Interpretive responsibility acknowledges the structural conditions that affect the transmission and reception of legal advice, while highlighting the legal adviser's expertise in shaping and determining how international law frames world politics. I hope that my work will provide a timely contribution to public debate about the acute professional tensions faced by government legal advisers, appealing to readers from a variety of disciplinary backgrounds, including politics, philosophy, international relations, history and sociology.

This project has been informed and enriched by a variety of professional experiences prior to my fellowship at Hertford, which involved direct exposure to issues of government liability and the precarious interplay between international and constitutional law. As a judge's clerk at the Court of Appeal of New Zealand, I dealt with several cases concerning government liability for historic abuse in a range of institutional settings. During my master's studies at Columbia Law School, I interned for the vice-chair of the United Nations Committee against Torture and

undertook a fellowship in professional ethics at the Auschwitz concentration camp in Poland. Before my doctoral studies at Cambridge, I worked as a human rights lawyer for the Open Society Foundations, a New York-based NGO, where I was involved in bringing international human rights and counterterrorism proceedings before the European Court of Human Rights and the United Nations Human Rights Committee.

Since taking up the fellowship at Hertford, besides advancing my book manuscript, I have published an article which uses narrative theory to critically evaluate the practice of targeted killing by the Obama administration, and a chapter in an edited book on international law as a discipline and profession. I am also in the early stages of developing a new research project on the intellectual history of international law, which examines the politics and ethics of those who provide counsel to rulers through a close analysis of texts in the "Mirror of Princes" literary genre.

The junior research fellowship at Hertford has been an incredibly enriching experience so far. It has enabled me to undertake sustained research in a collegiate environment, without the deluge of teaching and administrative requirements that have the propensity to engulf every waking moment of early career academics. I have greatly welcomed involvement in Hertford's undergraduate Law admissions interviews and outreach activities, including delivering a lecture on the use of force in Syria to a group of potential Hertford applicants based in Essex. As I frequently recaffeinate in Hertford's Senior Common Room under the imposing portrait of one of the college's most distinguished alumni—Thomas Hobbes—I feel grateful and humbled to have been given this opportunity to advance my research on the responsibilities of those who advise the leviathan.



HERTFORD
YEAR



Refurbishment of Old Hall

Professor Roy Foster,
Dr Katherine Lunn-
Rockliffe, Professor
Christopher Tyerman

Hertford's Old Hall was transformed during 2015-16 in a carefully conceived programme of restoration. The three members of the college's Works of Art Committee explain the process and the result.

The Old Hall in the north-east corner of the quad is one of Hertford's oldest buildings, a medieval structure which subsequently developed over four stages, from 1550 to about 1888. For its modest architectural volume, it is one of the best "small halls" to survive in Oxford. The earliest traces appear on the New College Lane side, as lintels for now long-removed windows and blocked openings. The doorway to the pantry is also an early survival from before 1550, when the first extensive rebuilding took place, dividing the lobby from the hall. Though a fragment of 1550s panelling remains, the room was re-panelled around 1710. During the eighteenth century and up to the 1880s, the kitchens were adjacent on the west side, accessed by a door from the Hall (still identifiable by a pair of narrow panels). A flat ceiling was installed in the 1820s and a timber floor was put in some time in the nineteenth century. The room as we know it today was probably one of Thomas Jackson's creations from the late 1880s (though no drawings exist). The fine coved ceiling, ceiling rose and cornice date from this period; the external door to the west was blocked, and changes were made to the windows. Further changes were made in 1955 after an infestation of dry rot, involving renewing some panelling

and remaking casement windows. The room was last redecorated in 1972, when the glass chandelier and glass-fronted bookcases were introduced, the parquet wood-block floor was laid, and a colourful Watts wallpaper was installed above them. The room remained prey to damp, deep-seated structural problems had been allowed to develop, and redecoration was long overdue.

Working with the historical architecture consultant Kevin Rogers, the Works of Art Committee decided to restore the room to the simplicity which its fine proportions deserve, removing the book-cases that covered up the eighteenth-century panelling (which needed much restoration) and installing a stone floor (Purbeck Thornback). Less obviously, an enormous amount of work was put into stripping out and replacing the heating and electrical services, which had long ceased to be fit for purpose. The panelling on the south, east and part of the north wall was dismantled for repair, and the lime and hair plasterwork on the south pier renewed. The massive and ugly panel radiators were replaced by freestanding cast-iron models, and a new lighting system was installed behind the cornice, with a central chandelier in bright-cut stainless steel by Thomas Leech. The design for this was the result

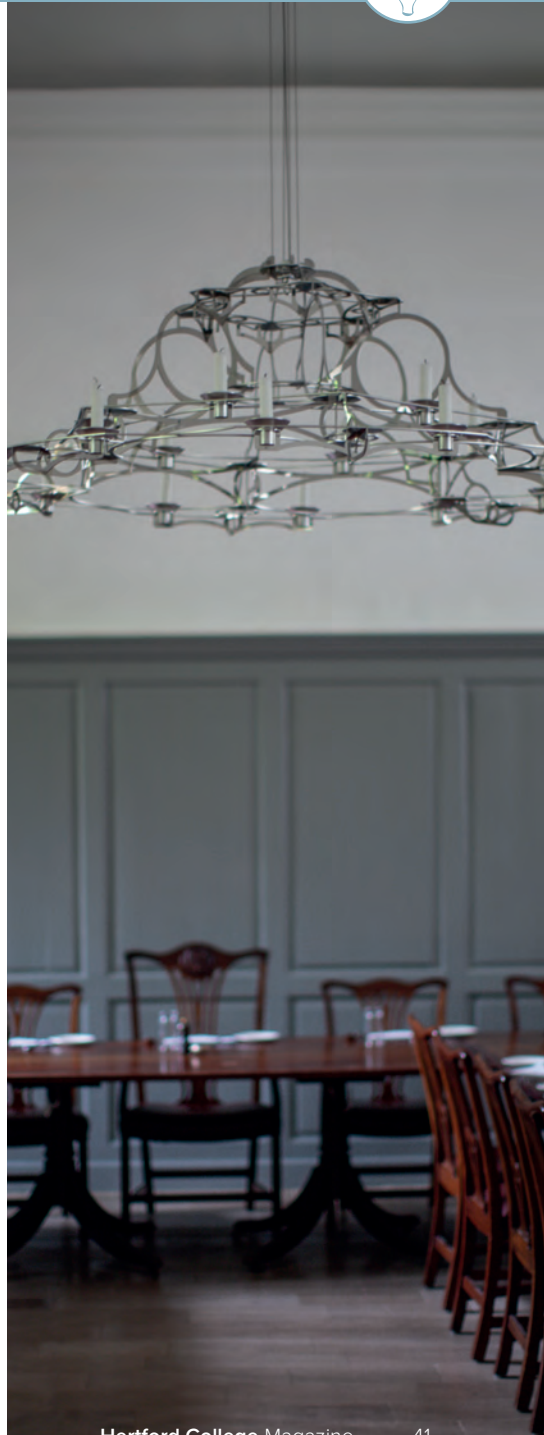


Old Hall before 1886; image by Henry Taunt (who took a number of photographs of the college over the course of its development). Reproduced by permission of Oxfordshire County Council



“The design for this was the result of a competition among Royal College of Art Product Design students”

of a competition among Royal College of Art Product Design students, who were shown photographs of the room and then submitted ideas to Kevin Rogers and the Works of Art Committee. Leech's winning design combines baroque references to the cornice with lightness and modernity. The windows were reconditioned and fitted with plain blinds instead of curtains. The oak chimneypiece (probably an early twentieth-century addition) was retained, but painted in with the panelling in a green/grey colour called "Drab", with the walls and ceiling painted in a soft off-white distemper. The decoration was carried out by the historic decorating expert Paul Knibb, who was responsible, twenty-odd years ago, for the graining of the Lower SCR. The lobby was also redecorated and re-floored in the same style. A re-hanging of portraits is planned, featuring, as far as possible, pre-nineteenth-century oil portraits and incorporating the "Reformers" canvas from the Upper SCR, in keeping with the restraint and handsome simplicity of the room as it now is. The Works of Art Committee much appreciated the patience shown by fellows during the lengthy process of renovation and redecoration, and the commitment of all the people involved, particularly Kevin Rogers and the craftspeople who worked on the restoration. It is hoped that this beautiful and historic room is now secured as well as enhanced for the pleasure of future generations of college members.









Maintaining Hertford

Dr Andrew Beaumont,
Home Bursar



As I write, we are at last putting the finishing touches to our new flagship building, located at No. 11 Winchester Road. Once complete, eight new, high-specification en-suite bedrooms will join our current postgraduate stock, providing a set of quiet, attractive residences for students at our satellite campus in north Oxford.

The Winchester Road project has proven to be quite the labour of love this past year, requiring the extensive refitting of a charming (although sadly long-neglected) mid-nineteenth-century Oxford townhouse. Reconstruction of the house itself has revealed some curious and

rather interesting finds. During the works, the team unearthed—among a number of other unusual items—a bottle of eau de Cologne dating from the late 1800s, which was not only half-full, but still smelled fairly good! My own favourite find on this job, however, proved to be a nondescript paper bag discovered in the attic by chance, which, it transpired, had been left there over a century earlier by a previous team of builders from Knowles & Son, the very same local firm engaged by the college to refurbish the property in late 2015. Having already provided this unexpected link between the building’s past and its present, this seemingly innocuous artefact had one more surprise yet to reveal: that No. 11 once had a name, Oak Villa.

In addition to this new property, the college will lease a further twelve rooms in two adjoining houses on St. Bernard’s Road from this autumn on. Accommodating postgraduates and visiting international students in the first instance, these properties, within a minute’s walk of Jericho, will provide a welcome boost to our property portfolio.

The college’s existing properties have not been short of attention either. Over the past eighteen months, Geoffrey Warnock House in south Oxford has been systematically upgraded, through a rolling programme of works due for final completion by Christmas 2017. Repair works at Old Abingdon House have remedied structural concerns with the fabric of the building, and the refitting of

“Reconstruction of the house itself has revealed some curious and rather interesting finds”



its interior will continue over the coming year. 9 Winchester Road is getting a long overdue overhaul this summer, the latest in an ongoing series of scheduled updates and upgrades to our properties in north Oxford.

Arguably, the greatest logistical challenge this year has been the retrofit of our 86-bed Graduate Centre at Folly Bridge to accommodate an improved, energy-efficient hot water system. As if modifying a steel-reinforced concrete structure to accept an entirely new power plant was not already a sufficiently tricky proposition, the college has faced the difficult task of carrying out a twenty-week programme of works in a building that never closes to its postgraduate members and conferences guests. We owe an immense debt of gratitude to the 2015/16 MCR, for its forbearance and understanding: the inconveniences borne by this year's common room have allowed the college to finally address a longstanding ambition: to deliver meaningful improvement for future residents of the Graduate Centre for many years to come.

Looking forward in the short term, the Old Library is due for a major refurbishment over the coming year: the Old Buildings Quad would certainly look much improved were it paved in stone. The Baring Room and Senior Common Rooms can also expect some much-needed TLC, as we embark on plans to renovate and refurbish. And beyond these goals, I'm still dreaming of a new, cutting-edge college kitchen; and of even grander, blue-sky projects still to come. After nearly seven years as Hertford's Home Bursar, I am prouder than ever to work as part of a team whose commitment and dedication to the college never cease to impress. We have achieved a great deal, but much more remains still to do. The college never stops, and neither does its ambition: and in that continuing spirit, I for one look forward to another exciting and challenging year ahead.





Hertford investments: an overview

Professor Pat Roche,
Investment Bursar



Since Hertford College was refounded with an endowment of £30,000 in 1874, it has sought to improve its financial position and provide security and stability for its operation and for the benefit of student education. Compared to most Oxford colleges, the value of the endowment has historically been small: nurtured by Roger van Noorden

“An increasing fraction of the investment income will need to be redirected towards support of future core activities”

throughout his tenure, it reached £20 million in the 1990s—still well below the median for Oxford colleges, but now at a level which could provide the college with a useful income. This growth was achieved through generous donations, together with careful oversight of investments and rigorous control of expenditure (so that any investment income surplus to the requirements of the college operation could be re-invested).

The college investments, which are currently £63 million, comprise the permanent endowment funds, covering both general and specific purposes, together with restricted expendable funds for specific purposes and as-yet unspent income which will be used for a range of purposes, including academic initiatives and investment in the fabric of the college. The current valuation of the permanent funds and endowment is ~£54 million, with the remaining £9 million of the investments split between specific funds (~£3.3 million) and accumulated income (~£5.7 million). Over the last three years, we have used the investment income for a variety of purposes in line with college strategy. For example, it has been used to fund junior research fellowships, student scholarships and more general student support; to partially fund the purchase of a property adjacent to the college holdings in Winchester Road in north Oxford to provide additional student accommodation; and to fund refurbishment work on the Catte Street site, including the restoration of the Old Hall.

Looking to the future, we will use the investment income to continue to support academic initiatives and to refurbish and enhance the college estate. Budgetary pressures are continually increasing due to cost inflation (for example, increased pension and National Insurance



contributions) and the burden of ever increasing regulation (for example, on visa and work permit checks and the administrative overheads they impose), and projections indicate that an increasing fraction of the investment income will need to be redirected towards support of future core activities. The investment income is one of the college's four major income streams, the others being fees and other academic income, contributions from the International Programmes activities, donations and legacies. Funds from investment are particularly important, both because of their size and because, in the absence of major financial crises, the estimated income provided can be modelled reasonably accurately, at least for several months in advance.

The college continues to rely on donations, together with careful budget control and an investment strategy for building the endowment further. Our investment strategy is cautious, with a low portfolio churn and low-fee approach to minimise costs. Valuable oversight and advice on the strategy is provided by the Investment Advisory Committee, which

includes both alumni and fellows.

The value of the investments rose above £60 million for the first time in the period before the 2015 general election (at which point we liquidated £2 million of investments to cover costs of refurbishment work anticipated in the following two years), before falling after the election and recovering to a value of £63 million (as at 1 August 2016) in the post-Brexit surge. The estimated annual income for the current academic year is £1.75 million. However, this growth has been achieved by restricting spending on refurbishment and maintenance of college properties and infrastructure. This cannot be sustained in the future, as the backlog urgently needs to be tackled. With careful stewardship of the investments and further growth of the endowment through alumni support, we will continue to balance the competing demands of expenditure on current academic needs and infrastructure, whilst following a sustainable approach that ensures the college will thrive and be able to support future students in the years to come.

“The college continues to rely on donations, together with careful budget control and an investment strategy for building the endowment further”





Hertford development update

Julia Thaxton, Director
of Development



Four years ago, on 27 September 2012, Hertford was holding a bumper-sized access day for over 100 students as part of our Bridge Centenary Celebrations. Sixteen-year-old Sam Bovill was among them, a student from one of Hertford's assigned outreach schools in Essex, who was sceptical that Oxford would be the place for him. Nonetheless, on 12 October 2015, Sam started his undergraduate course in Law at Hertford, and has loved his first year at the college: "I thought it would be more expensive than other universities (it isn't), I thought everyone would be uptight and posh and unfriendly and I'd be the lone common scoundrel (they're not and I'm not), and I thought the work would be absolutely brutal and I'd never have any free time again (it's only a little brutal)." From our vantage point in the Development Office, this is one of the real pleasures of working in a small community like Hertford: you can see the tangible impact our work has on the lives of real people, and the turnaround that can take place within a relatively short period of time.

A new influx of graduate students arrived in October 2016. Several of these have come to Hertford thanks to donations from alumni towards new graduate scholarships. A legacy from Michael Ferrar, son of Hertford former Principal Bill Ferrar, created a new graduate scholarship for James Read, who works at the interface of maths, physics and philosophy. At the other end of the academic spectrum, Eva Miller will be joining the Faculty of Oriental Studies on a scholarship funded by a Hertford donor to undertake research into the Neo-Assyrian king, Ashurbanipal. (Coincidentally, Ashurbanipal, who ruled in the seventh century BC, is the subject of a new Tom Cruise film that was filmed outside Hertford in May of this year!) A gift from alumnus David Elvin (1978) and his wife Helen created a new scholarship in Law, which will be taken up by Daire McCormack-George, who comes to Hertford having recently published on the extent to which a right to shelter can be found in Irish law. David Cucala will undertake research on artificial intelligence thanks to a donation for a graduate scholarship in Computer Science and Philosophy from Dr Ed Grefenstette, a former lecturer at Hertford. None of these students would be at Hertford without the new scholarships, and the scholarships would not exist without the generosity of Hertford's donors.

A donation from two donors also allowed us to launch Hertford's first-ever outreach summer school. In June, we welcomed 40 students from state schools with an interest in studying biology, chemistry, English or philosophy. It felt rather apt, as the students ate their lunch in Hall, that they were accompanied by 21 portraits of Hertford alumni in an exhibition celebrating Hertford's 50-year commitment to outreach. Those photographed had themselves benefited from a revolutionary access scheme, and the summer school students were the modern iteration of those forerunners. Centre stage amongst the portraits was a photograph of Neil



A history of Hertford College

Over the centuries, Hertford has often been the first, leading the way of scarce resources to introducing academic novelties.



Hertford was one of the first five of nine colleges in Oxford.

1548
The first Hertford student to be elected to a senior position in the University of Oxford.

(1025)
The first Hertford student to be elected to a senior position in the University of Oxford.

1820
Hertford was one of the first five of nine colleges in Oxford.

1877 1922
The first Hertford student to be elected to a senior position in the University of Oxford.

(1400 1500)
The first Hertford student to be elected to a senior position in the University of Oxford.

1002
The first Hertford student to be elected to a senior position in the University of Oxford.

(1805 1820)
The first Hertford student to be elected to a senior position in the University of Oxford.

1874
The first Hertford student to be elected to a senior position in the University of Oxford.

(1710 1740)
The first Hertford student to be elected to a senior position in the University of Oxford.

1801
The first Hertford student to be elected to a senior position in the University of Oxford.

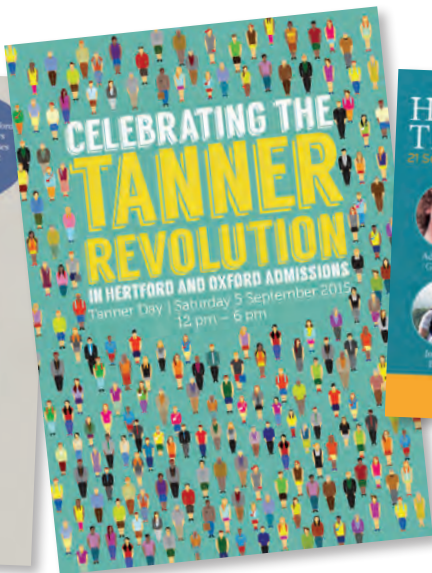
Tanner, who was one of the prime movers behind Hertford's commitment to access in the 1960s—and the desire to mark the impact that he and his colleagues had was the impetus behind the exhibition. Having launched our "Tanner Year" with a fundraising bike ride from Morecambe to Robin Hood's Bay, raising donations of £120,000 for student support, we also held a celebratory event in September, which featured alumni experiences of Hertford over the generations, alongside the present day access programme. There were many mentions of the momentous work undertaken not only by Neil Tanner, but also Jim Murray, Peter Ganz, Keith McLauchlan, Geoffrey Warnock and other colleagues across the decades.

We're enormously grateful to the alumni who have hosted us for some superb events. In November, for our annual London Drinks event, Carol Sennett (1982) invited 120 Hertford alumni into the Council Chamber at the BBC, part of the original

1930s Art Deco building, and arranged tours with unrivalled access behind the scenes of the television and radio studios. And in June, Nick Carn (1976) and his wife Eveline opened up their home and award-winning gardens for a glorious summer party next to Regent's Park. Spring saw Hertford embark on a North American roadshow, meeting up with 180 alumni and friends in ten cities across six states: Washington D.C., New York, Boston, Dallas, Houston, Denver, Boulder, San Francisco, Palo Alto, Los Angeles—as well as in Toronto and Mexico City. Our thanks to those alumni who made this possible by opening up their homes and places of work to us: in New York, Helen Mumford Sole (1982) and Peter Mumford hosted a large party of Hertfordians in their home in Greenwich Village; in Boulder, Mark and Cherine Herrmann (1986) held a drinks party in their home with fantastic views over the Rockies; in Toronto, Allan Sternberg (1973) hosted alumni drinks at



In 1960 Hertford had 12 Fellows and 2 students with running water.



the law firm Ricketts Harris LLP; and on the other side of the continent, Brian McKnight (2012) and Greg Novak (2006) hosted a reception at Polsinelli's San Francisco office.

2015-16 was a milestone year for development at Hertford. We held 24 events over the course of the year, with a record-breaking 1,820 attendees. We had our largest ever number of donors, with 742 people making a gift to the college. Our donors gave a fantastic £750,000 in pledges and gifts, with the majority of funds raised allocated towards student support. September saw our most successful telethon ever, with our enthusiastic student callers speaking to 625 alumni and friends. The thirteen callers raised £175,000 from 238 donors in the two-week calling period, and that total then rose to £220,000 with donations from those who gave in the weeks following their call. A generous matching fund of £175,000 was donated by a Hertford alumnus to kick-

start this record-breaking telethon, and we are delighted that six alumni have teamed up to donate a £100,000 matching fund for the 2016 campaign.

This year, we migrated to a new database for our alumni records, and while, admittedly, this may not be the most exciting news to report, it does mean that we are now able to answer some of the questions that alumni have asked us over the years. How old is the average Hertford donor? (Answer: 54). What is the average gift to Hertford? (£26 a month). Which subject produces the most alumni donors? (PPE, followed by Law). 49% of you have had contact with the college over the past three years (whether that is speaking to us on the phone, coming to an event, or sending us an email) and we hope that the remaining 51% will be in touch over the three years to come! Keep your questions coming, and we will endeavour to fill our publications with facts and stories to pique your interest.





The development team has undergone a few changes too. In April, we said goodbye to Helena Jones, our Development Assistant for the past three years, who swapped the dreaming spires of Oxford for the snow-capped mountains of New Zealand. And in September, Claire Blake, who has been with the team for six years, started a new role with the consultancy firm OEE. We're very grateful for all of their hard work organizing events and strengthening Hertford's community, and we wish them both the very best for the future. In their place, we will be welcoming Anouk Moser, herself a Hertford alumna who did a Master's at Hertford, and Heather Brickell, who joins from education charity AQA. We hope you will give them both the customary warm Hertford welcome!

To circle back to where we started—the impact that your donations have had. Last year Hertford awarded bursaries of £1,000 to 90 students with a family income under £53,000. To put this into perspective,

two donors giving £34 a month, with Gift Aid, funds one of those students—and we had 55 donors giving monthly donations of £34 or more last year. 60 students received hardship grants of between £500 and £1,000—all of these were funded by donations from alumni and friends of Hertford. Our outreach fellow visited 96 schools and spoke to over 3,000 students—and over half of our expenditure on outreach was funded by donations. A huge thank you to all of you who help us undertake this important work. Over the course of the year ahead, we'll be launching the #TeamHertford campaign, which focuses on uncovering stories from those who have benefited from your donations, so you can see the impact that your generosity has on real people. The Hertford community has a real team spirit (hence the name), with Hertfordians willing to go the extra mile and to give a helping hand to those who need it—and that's a team that we're proud to be a part of.

“ We had our largest ever number of donors, with 742 people making a gift to the college ”



The Library Dr Oliver Noble Wood, Fellow Librarian



One out, 1001 in? Normally, when books leave college premises destined not to return, it is for decidedly un-newsworthy reasons: weeding, for example, though essential to the never-ending process of updating library resources, rarely features prominently in college discussions (not even on the Library Committee). This year, however, began with an exception. On 15 October 2015, the college welcomed representatives from the Humboldt-Universität zu Berlin and the German Embassy in London to celebrate the return to the former of a precious volume of sixteenth-century maps and cityscapes. Talks by Nick Millea, Maps Librarian at the Bodleian, and senior research fellow Lucie Burgess, then Associate Director of Digital Libraries, were followed by the formal handover of the volume from the Principal to Professor Peter Frensch, Vice President for Research at the Humboldt, and Dr Yong-Mi Rauch, Head of Historical Library Collections. To mark the event, Hertford and the Humboldt collaborated with the Bodleian to digitize the two separate works bound together in the

one volume—a 1573 German edition of Abraham Ortelius’s *Theatrum Orbis Terrarum* and a 1574 German edition of Georg Braun and Frans Hogenberg’s *Civitates Orbis Terrarum*—with the result that these stunning, hand-coloured engravings can now be studied and enjoyed worldwide through open access online (just click on the link to “The Ortelius Atlas” on the Digital.Bodleian homepage, at digital.bodleian.ox.ac.uk).

As ever, this year has seen hundreds of new additions to the main teaching collection. Space freed up by the withdrawal of hard copies of journals available online was soon filled with the latest titles on undergraduate reading lists across the full range of subjects currently offered in college. The following all feature in the top ten most arresting titles now on the open shelves: *History of Shit*, *Eloquent JavaScript*, *From Skedaddle to Selfie: Words of the Generations*, *Among the Bone Eaters: Encounters with Hyenas in Harar*, and *Gut Feminism*. In subject-specific news, we are once again grateful to Mayer Brown LLP for the generous funding that has allowed us to invest in dozens more law textbooks. The following individuals are also to



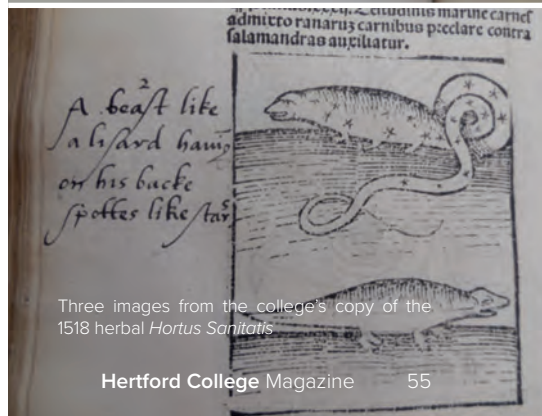
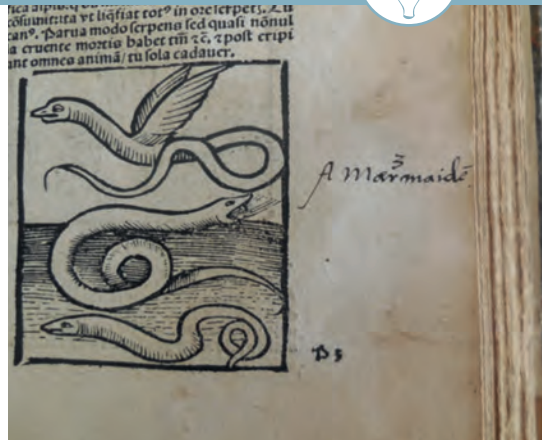
Simpkin kept the librarian company up to his death



“ These stunning, hand-coloured engravings can now be studied and enjoyed worldwide through open access online ”

be thanked for donations to the main collection (*denotes gift of authors' own works): Alan Bogg*, Rodney Chambers (1958), Andrew Dean*, Robin Devenish*, Heulwen Everton (2013), Augustus Fukushima (2013), Katharine Gardiner (2015), James Harkin (2012), Kevin Hilliard, Rachel Hunter (2012), Will Hutton*, Michael Leach (2014), Hye Sun Lee (2013), Lesley Long, Jamie Lorimer*, May Martin (2015), Steve New, Oliver Noble Wood, Sophie Pridgeon (2012), Milo Rignell (2015), Ian Sheehy (1997), Emma Smith*, Christopher Tyerman*, The Tyndale Society, Claire Williams, Alison Young, and the late Christopher Zeeman. Special thanks go to both Stephen Pratt (1938), former headmaster of King Edward VI School in Stratford, who has bequeathed the college a superb collection of history books, and Alick Robertson, current Assistant Headteacher and Head of Sixth Form at The Sweyne Park School, Rayleigh, for an equally impressive collection of works on French history.

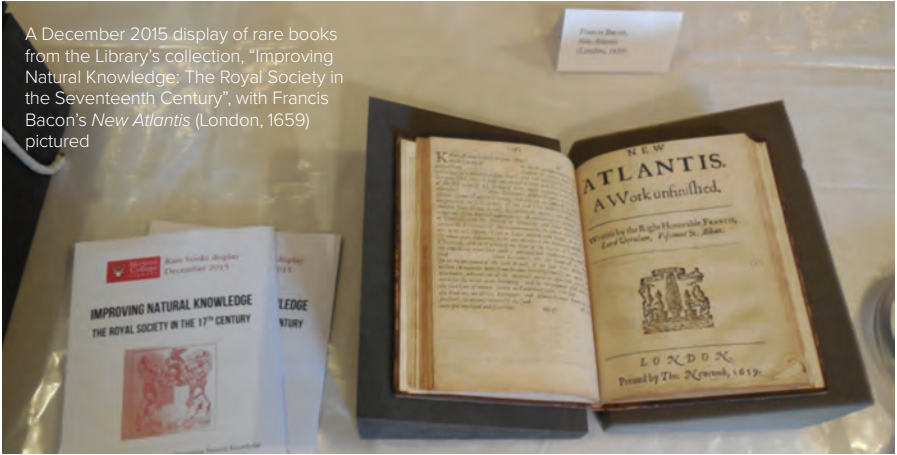
In terms of décor, this year has seen further improvements to the main reading rooms, both upstairs and downstairs. Last year's new red chairs—a definite hit—and the permanent display of the Robert Taylor alumnae portraits have been followed by a new colour printer (much in demand), improved, energy-efficient lighting on the ground floor (readers can now see),



Three images from the college's copy of the 1518 herbal *Hortus Sanitatis*



A December 2015 display of rare books from the Library's collection, "Improving Natural Knowledge: The Royal Society in the Seventeenth Century", with Francis Bacon's *New Atlantis* (London, 1659) pictured



and air-conditioning in the main reading rooms (being installed as I type). The last of these should come as a relief to future generations of finalists—temperatures upstairs having peaked at a tropical 29.4°C during Trinity in recent years. The hope must be that the more agreeable conditions that should result from this investment not only aid concentration in the run-up to finals, leading to a surge up the Norrington Table, but also help curb the perennial demand for water fountains on all floors. Elsewhere, the Classics, and Russian and Slavonic collections have been weeded and restored to the main library, as part of preparations for the refurbishment of the Old Library on the ground floor of OB3/4. More on that next year—we hope.

2015–16 has been a bumper year for book displays. Highlights have included: in October, "A Voyage of Discovery: Mapping Provenance in Hertford College Library", an exhibition coordinated by a team including current undergraduates Beth Potter and Stan Carrodus (both 2014) as part of the Ortelius celebrations (one of the items on display was the newly conserved *Hortus Sanitatis*, a 1518 herbal

complete with fascinating sixteenth-century marginalia); in December, "Improving Natural Knowledge: The Royal Society in the Seventeenth Century", which drew on Hertford's impressive antiquarian holdings in science and geography, and featured another recently conserved work, the college's copy of



Ted visited Hertford Library during the TedX Oxford conference this year



The flea, from the college's copy of Robert Hooke's *Micrographia* (1665)

Robert Hooke's *Micrographia*, as well as works by alumni Robert Plot and Edward Tyson; in March (and again in May), "Rights and Wrongs: Social Justice in and through Books", curated by librarian Alice Roques, Politics lecturer Dana Mills, and the PPE students, to coincide with this year's John Donne Lecture by Frances O'Grady (for more on this, see Dana's own thoughts further in this magazine); and, in June, a farewell event in honour of this year's visiting students, at which the class of 2016 had the chance to get up close and personal with parts of the antiquarian collection (including the final item conserved last year, Thomas Hobbes' translation of Thucydides).

Thanks go to all those involved in organizing these events, especially to Alice and to Dana, who have worked tirelessly throughout the year to explore the antiquarian collection's rich academic potential. Dana leaves Hertford this year to take up an exciting new post in New York and we wish her all the best for this new adventure and beyond. As ever, we also owe a debt of gratitude to the National Association of Decorative

“ 2015–16 has been a bumper year for book displays ”

and Fine Arts Society volunteers, who have dedicated another twelve months of unstinting care and attention to the preservation of the college's collections. Having worked through 98 volumes from the Classics section this year, they are now looking forward to moving onto some of the science books in the autumn. Last, but by no means least, thanks also go to this year's junior librarians (Johanne Fernandes, Esther Hadman, and Dominic Hewett (all 2013)) and graduate library assistant (You Zhao (2015)). It is down to all of the above, and especially to Alice, that the library finds itself in such rude health as I hand over the role of fellow librarian to my successor, Emma Smith.



Sylvia Pankhurst's birthday bash

Dr Dana Mills,
Lecturer in Politics



On 5 May 2016, we marked two events in Hertford: the Police and Crime commissioner and local councillor elections, and the 134th birthday of radical suffragette Sylvia Pankhurst. This was a great opportunity to redisplay the exhibition curated for the 2016 John Donne Lecture given by Frances O’Grady, Trades Union Congress General Secretary.

The exhibition, entitled “Rights and Wrongs: Social Justice in and through Books”, which our inspired librarian Alice Roques co-curated with PPE students studying Politics, sought to highlight the conversations we have been having about books, education and social justice. We asked the question: *what inspires you to think about social justice?* Students’ choices were varied and showed the diversity of topics we’ve been discussing: from Victor Hugo’s *Les Miserables* to George Orwell’s *Down and Out in Paris and London*, via Niccolò Machiavelli’s *Discourses on Livy*, Joe Sacco’s *Palestine*, and Henrik Ibsen’s *A Doll’s House*, to name but a few. Some historical items from the library’s collection of antiquarian books supplemented those published (or

edited) more recently: a 1515 edition of Tyndale’s translation of *The Bible*; a printed edition (published in 1642, the start of the English civil war) of a thirteenth-century Anglo-Norman legal treatise, *Miroir des justices*, arguing that those in positions of power are answerable to the law; and a similarly themed broadside, published in 1647, titled *The Peoples Out-cry against the Oppressor*.

The centrepiece was a triptych of Hertford’s very own copy of Mary Astell’s *A Serious Proposal to the Ladies* (1697), which advocated the education of women, Sylvia Pankhurst’s *The Suffragette* (1911), and Rachel Holmes’ acclaimed biography *Eleanor Marx: A Life* (Bloomsbury, 2014). We have been reading and discussing Eleanor Marx’s work in our tutorials. It seemed appropriate that Eleanor, the foremother of socialist feminism, would be the guest of honour in this party thrown for Sylvia Pankhurst, since Sylvia is the subject of Rachel’s much awaited next book and we had all been introduced to Sylvia by Rachel during her stay in Mansfield College as Visiting Literary Fellow.

“In one of the most turbulent times in politics in the UK and beyond, it is important for us as students of politics to reflect on the women and men who have given us social democracy as we know it today”



But, as it was Sylvia's birthday, it was far more than just another exhibition! We had caterpillar cake (distributed evenly between all attendees, to keep faith with Sylvia's socialism); there was a dedicated Sylvia Playlist featuring Beyoncé (she knew very well that girls ran the world), the Red Flag, and Disney's feminist *Frozen* anthem ("Let it go"); there were suffragette themed decorations, and general merriment. All attendees of the birthday party received their very own goody bag, including Sylvia's *The Future Society* and a "Deeds not Words" badge.

In one of the most turbulent times in politics in the UK and beyond, it is important for us as students of politics to reflect on the women and men who have given us social democracy as we know it today. All that's left is to wish Sylvia a very happy birthday, and to end on a quote from the birthday girl herself:

Every movement and every interest that desires to change or maintain, or in any way affect the social order, must go to the masses in the last analysis. Force may overthrow governments, and set up governments, but even governments cannot long remain, unless they obtain the acquiescence of the governed. Still more an equalitarian society, functioning, not under authority and economic pressure, but by the common will, can never arise and flourish save by the active co-operation of the masses.

(Sylvia Pankhurst, "Education of the Masses", Dreadnought Pamphlet No. 1, 1918)





Addendum on admissions: admissions before the "Tanner Scheme"

Professor Robin Devenish, Emeritus Fellow in Physics



Robin adds a postscript to his article on the Tanner Scheme, published in last year's issue.

I am grateful to Brian Steer for a first-hand account of how the Hertford undergraduate admission process was improved in stages leading up to the Tanner Scheme.

In Michaelmas term 1964, Hertford's Governing Body set up a committee consisting of the Principal (Sir Robert Hall), Felix Markham (tutorial fellow in History), Peter Ganz (Professor of German), Neil Tanner (tutorial fellow in Physics) and Brian Steer (tutorial fellow in Maths) to consider how admissions could be improved. By the end of Hilary term 1965, the committee duly reported, proposing what eventually became known as the Tanner Scheme. Despite the extra work involved and the consequent obligation to be in Oxford in

late September, it was approved by the Governing Body with varying degrees of enthusiasm.

Previously, the main method of selection used to be the entrance/scholarship examination, though there were a few cases of admission by interview alone. Also, in common with most colleges, Hertford had "closed" scholarships tied to a particular region or school—for Hertford the region was south-east England, north of the Thames. Fellows did sometimes visit schools in the region to talk informally to potential candidates. However, the admissions process that was to follow would be of a different order of magnitude and would be particularly successful for Hertford.

The Tanner Scheme started in a small way in Michaelmas term 1965. Its effectiveness depended on actively seeking candidates, especially from state schools, and interviewing them all together in September. Places were then offered to the best candidates. A report and advice was always sent to the school. As Brian remembers, colleges were not alarmed when the new approach started. However, that changed when they realized the extent and success of the scheme.

“Previously, the main method of selection used to be the entrance/scholarship examination, though there were a few cases of admission by interview alone”



Student life

The Junior Common Room Ella Drake (2014), JCR President



This year has showcased Hertford's undergraduates' talent and commitment to the college. The energy and enthusiasm with which students have taken on committee positions, organized festivals, and engaged in intellectual debates and discussions with high calibre speakers proves that Hertford students really are the best of the best. With a new intake of freshers, blades in Torpids, a huge arts festival, a trip to No. 10 Downing Street and a winning Water Polo cuppers team, I really don't think we could have fitted more in!

On Tuesday 6 October 2015, over 120 new undergraduate students arrived at the college lodge, ready to start their Oxford careers. For the ten-strong JCR freshers' reception committee, led by Ruairadh South (2014), however, this meant a long day of carrying heavy boxes

upstairs, watching squirming freshers "manage" their all-too-often embarrassing parents, and remembering that it was only a year ago that we were in their shoes. In all our second-year wisdom, we knew the importance of making the most of any week in Oxford which didn't involve essays or problem sheets, and so we had a busy timetable of events lined up for the new students. We continued the tradition of hosting Jazz and Cocktails, a black-tie soiree on the Saturday night, held this year at the superbly designed new Maths Institute, with music provided by the Hertford Jazz Band and "cocktails" provided by the expert Freshers' Committee. We also continued the new tradition of the Big Night In on the Friday night, which had been introduced by the 2014 committee. Music and comedy groups such as Out of the Blue and the Oxford Imps performed for the freshers in Hertford's very own Baring Room. Making the week as inclusive as possible was a key priority for the committee, and often it was the non-alcoholic events, such as an over-subscribed visit to the board-game café Thirsty Meeples, that were the most popular. All in all, Freshers' Week was a resounding success and the freshers were thoroughly settled in by the time their first essay deadline came around.

As ever, the festive season brought with it the Hertford tradition of decorating a tree in Holywell quad. Incredible scenes ensued, with the quantity of mince pies and mulled wine matched only by the amount of confusion about how to get the star on top. Having press-ganged every tall student within a two-mile radius into helping, we finally succeeded in erecting and decorating what we thought was a sturdy tree—the classic strong winds



of an Oxford winter proved us wrong, though, and the tree was found sadly defeated within only a day of being put up. Michaelmas flew by as always, and before we knew it, a new JCR exec committee had been elected and we were thrown into the deep end from the offset!

The variety, standard and commitment of Hertford talent never ceases to amaze me. This year, Hertford held one of the biggest arts festivals in Oxford, Hartfest, with over 20 events across three days in early May. This small task was led and organized by our newly appointed Arts Rep, Ava Scott. Hertford's wealth of creative students was fully exploited: the weekend included many workshops and events in art, drama, comedy, film, dance and music. Main events included Jazz on the Quad on the Friday, with the Hertford Jazz band, accompanied by Pimms, strawberries and cream. On the Saturday, a scratch orchestra and a ceilidh brought more music to the college, and the Will Hutton portrait session produced many beautiful artworks paying tribute to our Principal. On the Sunday, we got to see these pieces, alongside life drawings from the weekend, in an exhibition in the chapel. The open mic night was a musical-comedic finale to the weekend, which raised over £70 for the local food bank, via cake sales. The weather was warm and balmy, making for a truly festive weekend.

Since its inception over four years ago, the Hertford Business and Economics Society (HBES) has consulted on projects



Members of the Hertford Business and Economics Society outside No. 10 Downing Street: William Barnes (2014), Olivia Shillabeer (2013), Kim Engel (2013) and David Cartwright (2014)

for various companies and hosted many speakers through Will Hutton's Conversations. Just two of HBES's projects have included consulting for Barclays on sustainable banking solutions in Africa and the Happiness Project, which looked at how to measure happiness and use it as a substitute for GDP to measure the wealth of a country. The latter project was presented to Cabinet Secretary (and Hertford alumnus) Jeremy Heywood (1980) this past year and was followed by a tour of No. 10 Downing Street (see <https://coanalysis.blog.gov.uk/2016/01/21/integrating-wellbeing-into-public-policy/>).

It is evident that Hertford students are very good at starting new traditions. However, we are also taking steps to challenge old ones which no longer have a place at Hertford. The experience of women at Hertford and in Oxford more generally is not always a positive one. This year, the JCR, and in particular our Women's Rep Mercy Haggerty (2015), have tried to tackle this problem head-on. She has set up multiple discussion forums online and termly in the JCR, as well as initiated feminist-themed film nights in the JCR. There are also two

“Hertford students are very good at starting new traditions”



members of Hertford, Lily Erskine (2014) and Lily Goodyer Sait (2013), who will be representing the country at the world powerlifting championships in Belarus this year. Lily Erskine has been leading bi-weekly circuit training sessions for women in the Hertford gym—these have made the gym a far more comfortable place for women and have been a huge success. We hope this work will continue to make Hertford a more welcoming place for women.

This year is a year of referenda, it seems. The Oxford University Student Union (OUSU) has had a referendum on whether to continue affiliation with the National Union of Students (NUS). Hertford hosted a debate with campaigners, two of whom were Hertford's own students. Both sides argued eloquently and passionately, giving our students a chance to ask questions and engage in the debate. The eventual outcome of the referendum was to remain in the NUS.

I am proud to say that Hertford College had over 70% of students registered to vote for the EU referendum (excluding those who were not eligible to vote). This was the second highest percentage out

of all the Oxford colleges. A campaign was run by OUSU called “#pledge2reg”, to encourage students to get registered to vote by posting proof of registration on Facebook. The competition was a fierce one, with prizes such as an ice cream truck visit and a ball pool at stake. Hertford, the underdog, came from behind, with over 300 pledges in a week to become neck and neck with the leaders, St. Hilda's. When it came down to it, Hilda's won by ten pledges (some would say through foul play...), and they have now been officially named our college rival. To say young people are disengaged with politics may be generally true, but it is certainly not the case at Hertford.

This year has been extremely busy from the outset, with Hertford students engaging in a wide range of activities from powerlifting to clay modelling. I am very proud to represent such a talented and engaged set of students, and will be sad to hand over this position this Michaelmas. I am so grateful for the opportunity to get to know this diverse body of students and for all the support I have received from the staff, alumni and fellows.

“ HBES's projects have included consulting for Barclays on sustainable banking solutions in Africa and the Happiness Project, which looked at how to measure happiness and use it as a substitute for GDP to measure the wealth of a country ”



The Middle Common Room

Andrew Walker
(2013), MCR President



Hertford's Middle Common Room is a community of graduate students that is diverse in every sense of the word. We have students from each corner of the world, who are involved in all manner of academic pursuits. From archaeology to zoology, from taught courses in administrative law to field work studying elephants in Zambia, every student has interests as unique and fascinating as one can imagine.

Before our annual graduate dinner in Trinity term, I was chatting with the Principal over a glass of champagne in OB Quad, and he asked me what my favourite moment has been of my (soon to expire) term in office as MCR President. I paused, took stock, and then realized that it may well have been that very moment. Standing around me on Hertford's lawn was a cohort of graduate students who are amongst the finest in the world. 100 of the brightest young minds, previously strangers, but now a tight-knit community of students and friends, brought together under one banner: Hertford College. I was taken back to my own first year at Hertford,

remembering the feelings of trepidation that precede any new endeavour, and marvelling at how quickly these had waned once I felt the community of the college around me. I felt an immense sense of pride that, once again, the MCR had helped transform a medley of talented strangers into a cohesive collective of friends.

Throughout the year, the MCR Committee have done their utmost to provide an experience of Oxford that is as all-inclusive as possible. From academic soirées, to drink-tasting events, sports trips, film nights, live jazz, dinners, and boat parties, the term card has had plenty to offer. We have also sought to expand the workings of the MCR beyond its borders, and are proud to have made financial donations to a number of charities with which members of the community have links.

One challenge that faces any graduate community is one of access. Financial assistance is much harder to come by for graduates than for undergraduates, for whom both the university and college provide bursaries on a regular basis. In many subjects, graduate funding opportunities are few and far between. An increased uptake of Master's courses across the country, together with more top graduates from top universities, means that the job market for recent graduates has never been tougher. Taught Master's

“ Taught Master's courses are often regarded as pre-requisites in the professional job market ”



courses are often regarded as pre-requisites in the professional job market (“the new First”), and consequently many MCR students undertake further degrees in order to better their CV and chances of employment. But the expense of such degrees—students have to pay out an extra £20,000 or so, on top of their undergraduate debt—are a very effective disincentive to those without independent wealth, whether their own or their parents’. Access to graduate education, therefore, can be seen as one of the last bastions impeding class mobility.

This year, we have been working hard with the college to break this down. Hertford has increased the number of fully funded graduate scholarships available and we are seeking new ways to co-fund students with other funding bodies—such as the Drapers’ Company, who are generously funding a series of graduate scholarships for the next academic year. Financial support is also often available to students who require it, and the college increased the amount of housing it offers graduates this year. By continuing to invest in its students, both undergraduates and graduates, Hertford has produced a community of young people who have the best possible chance to thrive in our changing world, and I am confident that the community I see around me will go on to great things.

Finally, I’d like to thank all the members of the MCR for this very special year. It is one teeming with memories I shall never forget. I wish my successor as President, Steven Crabb (2012) all the best; I’m sure the MCR will continue to thrive in his capable hands. And to those MCR members who have left us, I wish you all the best in wherever life takes you next. Come back and visit!





Graduate report: Read to Rise Athol Williams (2015)



One of Hertford's graduate students is Athol Williams from South Africa, who is completing a Master's degree in Political Theory. Unusually, he is also an award-winning poet, who was recently awarded the Sol Plaatje EU Poetry Prize for his poem "Streetclass diseases". Athol's third volume of poetry, *Bumper Cars*, was published in 2015 by *The Onslaught Press*. Here he writes about his charity Read to Rise.

I grew up in Mitchells Plain, a densely populated low-income township in

South Africa, notorious for having the highest incidence of violent crime in a country ranked among the most violent countries in the world. Created by the Apartheid government in the 1970s to isolate people of mixed ethnic descent, many forcibly removed from their homes, Mitchells Plain is a township of 400,000 people, over-run by gangs and beset with poverty, drug-abuse and hopelessness.

The combination of state oppression and gang violence made growing up in Mitchells Plain a living hell. I endured police raids, lockdowns by security forces, and frequent violent assaults by gangsters. I have been mugged countless times, assaulted, stabbed and shot at. But I was fortunate to be among the few who escaped to gain a world-class education, which includes Master's degrees from Harvard, MIT, LSE and the London Business School, followed by a successful international business career.

Unwilling to accept the continued dark cloud that hung over Mitchells Plain, I returned to my hometown in 2013, after years of living in Boston, London and Johannesburg. I set out to bring some light and hope in the way I knew best... through books. Books had literally set me free and I wanted my old community to experience the liberating force of literacy. I knew first-hand that the power of education can change the course of someone's life and wanted to enable and inspire young people to rise above their circumstances. To achieve this goal, along with my wife, I founded **Read to Rise**, a charity that seeks to promote youth literacy while inspiring youth to live greater lives.

Read to Rise seeks to address two major issues. Firstly, the lack of access to appropriate books. Of the 46 primary schools in Mitchells Plain, fewer than 10% have functional libraries. We address this gap by placing a "mini-library" in each classroom that we visit—consisting of a

“ I endured police raids, lockdowns by security forces, and frequent violent assaults by gangsters ”



brightly coloured bookshelf that contains 50 new age-appropriate books. Most children in these communities have never owned a reading book, so we ensure that each child gets to own at least one new book. By introducing books into the home for the first time, this simple act has a profound impact—not only on the children but on their families as well. The second major issue we try to address is the lack of motivation to read. We therefore do not just drop these books off at schools, we also employ a team to deliver dynamic in-classroom interactive sessions and run reading contests.

Respect and dignity are important elements of our work. The poor often have to settle for used goods and to suffer the indignity of not being able to provide for themselves. We take great care to show respect and to show that we care. We only provide new high quality books. We always hand the book directly to a child, so that we make eye contact with them and offer personal words of encouragement.

We follow a community-centred approach, so we involve local politicians, businesses and community members in order to encourage buy-in and sustainability. We draw volunteers from our communities to read to children and to cover books in plastic. We source many

of our products locally, thus contributing to local job creation—for example, the bookshelves that we place in classrooms are manufactured by a local charity that employs disabled residents.

To date, we have delivered our programmes to 30,000 children and have seen the average number of books read annually per child increase from two to eight—still a long way from where it needs to be, but a significant improvement. We receive constant feedback from teachers and parents that our work is creating excitement about reading and learning among children.

Initially, I funded all our operations, but we have now begun to raise funds from the public and organizations. For example, our funding this year includes a generous donation from the Hertford MCR, which funded books for over 200 children. While we purchase the books for the mini-library, I decided to write and publish the books that we distribute to children to take home. This ensures that costs are kept to a minimum, since I take no royalties or other payments and we can be sure that the content of the books are both educational and inspirational. I am shocked by the content of some children's books, which perpetuate violence or gender

“Most children in these communities have never owned a reading book, so we ensure that each child gets to own at least one new book”



“To date, we have delivered our programmes to 30,000 children and have seen the average number of books read annually per child increase from two to eight”

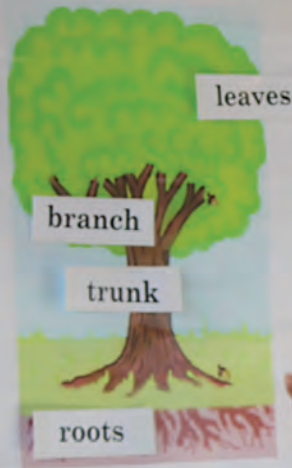
and racial stereotypes—some of the very social ills that we are trying to overcome.

I created the “Oaky” series of books, about an oak tree as a symbol of learning and hope. We have already published two “Oaky” books and will publish a new book annually. One creative idea we are exploring is to commercialize “Oaky”, so that we can sell books and associated merchandise through a social enterprise that funds our charitable work.

As is inevitable in disadvantaged communities, the needs are vast and the socio-economic challenges complex. Our community development philosophy is built on the belief that an inspired person can overcome any challenge. This was how I managed to escape poverty, a story captured in my autobiography, *Pushing*



parts of an oak tree



21 Au
 Nouns Pronouns
 Tom eats his fruit
 Anne brushes her
 We get in our ca
 The boys wear the
 to school,
 Mother will

How an acorn grows into a big oak



Boulders, which is set for release in October. We have developed a **Read to Rise** programme for young adults, where I will distribute this book and share my story in the hope that it will awaken them to life's possibilities.

Literacy and inspiration are good first steps to address the root causes of poverty and crime, but we know it is not enough; we also need to rethink our social institutions. My studies at Hertford seek to understand the structural processes that produce persistent social ills and explore social and economic institutional arrangements that may further the cause of social justice. My studies will allow me to thoughtfully expand and deepen the work of **Read to Rise** and to play a more meaningful role in academia and policy-making in South Africa.

“ We also need to rethink our social institutions ”



Sport

Chantal Paine (2014)



Over 2015-16, our athletes have pushed for win after win. Hertford's sports teams continued to climb in the college league tables as well as to give out great performances in cuppers competitions, including one cuppers win from the water polo team, captained by last year's JCR sports officer, Naomi Vides (2012).

ROWING

After a slow start to the year due to bad weather, which prevented any boats from rowing on the river for most of Michaelmas, Hertford College Boat Club's crews have consistently impressed, and they have reaped the rewards of early morning outings and gruelling circuit sessions.

W1 was particularly successful, moving up three spaces in Torpids to take eighth place on the river and become the highest ranking women's boat at Hertford in the past 50 years. Their drive for success did not stop there. Marie Becker (2014) next captained her crew through a brutal Women's Eights Head of the River race in the middle of a London hailstorm, which saw our women placed within the top half of all boats competing, and finally took them through Summer Vlls, winning blades in Division 1 and becoming the highest ranking blades-winning crew on the river this year.

HCBC's men's crews fought their way tirelessly through the Christ Church regatta, Torpids, Head of the River, and finally Summer Vlls, in which M2 were robbed of blades after a klaxon ended the final race before they were able to secure a bump off Wolfson.

FOOTBALL

In football, the men's second team did exceptionally well, with music virtuoso Michael Bentham (2014) leading the team to win the JCR reserves 4th Division, conceding zero losses and only one draw over the entire season. Our women's football team also saw continued success, remaining in a strong position in the first division with exceptional performances from all members, including Blues keeper May

“Over 2015-16, our athletes have pushed for win after win. Hertford's sports teams continued to climb in the college league tables”





Martin (2015). The women's team also reached the cuppers semi-finals, only to be knocked out by the eventual winners of the competition. Our men's first team started off their season well, with a 0-0 draw to Christ Church in a match attended by Hertford alumnus Norman Perrin (1948; a member of the 1950-51 cuppers winning team), only to suffer a few tough losses, leaving them at a nail-biting four points off promotion by the end of the season.

OTHER SPORTS

The rugby team has worked hard as usual, ending at the top of Division 3 after winning every game played and with promotion to Division 2 well within their sights for next year. Captain Charlie Beard's (2014) continued drive for success pushed Hertford to the semi-finals of cuppers as well in both the rugby union cuppers and 7s cuppers competitions.

Arguably, some of Hertford's best performances this year have been on the cricket pitch, under the direction of captain Matthew Edwards (2014). Recently promoted to division 1, they not only won their first cuppers match in eleven years but reached, and then triumphed in, the final, an achievement unrivalled by any Hertford cricket team in the past. Netball's exploding popularity has led

to continued successes both in all-women's and mixed competitions, and the team finished third in their Division. Hertford's famous darts team has also secured their place in the top of the 1st division for the second year running, despite suffering their first loss since the club's foundation in 2012.

As well as team successes, this year Hertford also boasts the highest number of students in the university who represent the university at an elite level, scoring a total of 37 points on the Rogers Table, which awards two points to a full blue, one point to a half blue, and one point to colours. Amongst others, James Ross (2014) and Naomi Vides (2012) competed in the water, Helen Strain (2013) dominated Cambridge on the hockey field, Brittney Olinger (2014) and Archie Jones (2013) outran the competition, and Matty Hughes (2014) juggled a chemistry degree while playing for the prestigious Marylebone Cricket Club Universities (MCCU).

In summary, a fantastic and historic year for sport at Hertford. The level of dedication and hard work from all of our student athletes remains outstanding, and I am looking forward to another great year of sporting success.

“As well as team successes, this year Hertford also boasts the highest number of students in the university who represent the university at an elite level”



Subjects and research

Chemistry

Professor Hagan Bayley writes:



In May, I was honoured to be awarded the Menelaus Medal (www.learnedsociety.wales/medals/menelaus-medal/) by the Learned Society of Wales, of which I am a fellow. William Menelaus was an engineer who made his fortune running a nineteenth-century ironworks in South Wales. The medal is awarded in any field of engineering and technology to a person connected with Wales; I was brought up in Prestatyn, then in Flintshire. But the award came at a busy time. On a Wednesday in term, after my morning Chemistry lecture, I rushed to Cardiff by train, in time for the presentation and a delightful dinner at the Royal Welsh College of Music & Drama. Then, there was just enough time for a couple of pints of Brains in celebration, before getting up at 5 am to be back in time for my Thursday morning lecture in Oxford. Later this year, I'll give the Medal lecture in Bangor.

The Menelaus Medal, awarded to Professor Hagan Bayley by the Learned Society of Wales



Computer Science

Professor Michael Wooldridge writes:



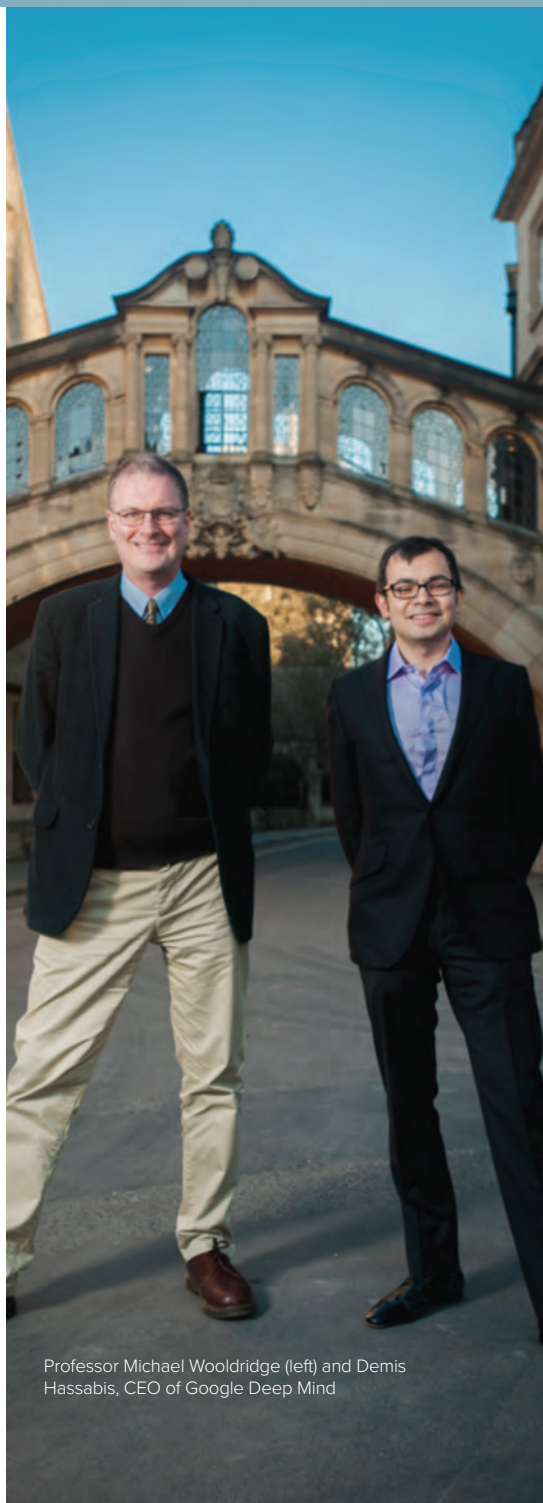
Over the past year, my five-year European Research Council fellowship grant has moved into its second phase, and the research ideas that my colleagues and I have been developing have become increasingly mature. Research on the project has coalesced around a concept that we have named “equilibrium checking”. The basic idea of equilibrium checking is to try to understand the behaviour of computer systems when some system components are assumed to be pursuing goals delegated to them by users or owners, where these goals may not be consistent with the goals of other system components, or indeed with the goals of the system designers. The term “equilibrium” here refers to the fact that the key concept we use in trying to understand the possible behaviours of such systems is that of the Nash equilibrium, which is a fundamental concept in game theory and economic analysis. One of the aspects of our work that I personally find particularly appealing is that it takes ideas from areas as diverse as economics and logical theory, and applies them in completely new domains. We presented our work this year at the American Association for Artificial Intelligence (AAAI) conference in Phoenix, Arizona; at the Knowledge Representation (KR) conference in Cape Town, South Africa; and at the Autonomous Agents and Multi-Agent Systems (AAMAS) conference



“One of the aspects of our work that I personally find particularly appealing is that it takes ideas from areas as diverse as economics and logical theory, and applies them in completely new domains”

in Singapore. In the final phase of the project, we are building a software tool that demonstrates the ideas we have been working on.

My research falls within the broad area of artificial intelligence (AI; see earlier article), which has continued to grab headlines throughout the year. Perhaps the biggest news story was by the UK's own Deep Mind group (essentially a Google-owned AI research lab based in London), who made worldwide headlines in March when their Alpha Go programme beat a Go grandmaster 4-1 in a series of matches held in Seoul, Korea. The game of Go is not so well known in this country, but it is very well known in the AI community because it is so complex. At any given point in a game of Go, a player has about 200 possible moves available on average, compared to only about 30 on average in a game of chess. This makes the game phenomenally hard for computers, with traditional computer game-playing techniques simply unable to cope. Experts in the area expected no serious progress with Go playing programmes for decades, and Deep



Professor Michael Wooldridge (left) and Demis Hassabis, CEO of Google Deep Mind



“Nothing prepared us for the scale of interest: all 800 seats in the Sheldonian were taken within 48 hours”

Mind’s breakthrough took the community by complete surprise. As chance would have it, the Department of Computer Science at Oxford, of which I am currently Head of Department, had booked Deep Mind CEO Demis Hassabis to give a lecture in February 2016—just ten days before the Go competition took place. Demis is something of a celebrity in computer science, and so we expected a popular lecture—in anticipation of this we booked the Sheldonian theatre. But nothing prepared us for the scale of interest: all 800 seats in the Sheldonian were taken within 48 hours. (In case you are in any doubt, this doesn’t usually happen for our lectures.) On the day, Demis turned up with a camera crew making a film about his life, and I had the distinctly odd experience of walking through the streets of Oxford making small talk with Demis, while a camera crew filmed us from across the street... The lecture was outstanding, and if you want to understand what the current fuss in AI is all about, I urge you to watch it: <http://tinyurl.com/h5wknrn>.

Within the college, I took up the role of Steward of the Senior Common Room in May 2015. This is one of those roles which I daresay doesn’t really exist outside of Oxford colleges, and for which there is no clear job description. Basically it involves taking responsibility for the meals and services provided by the Senior Common Room. The day-to-

day reality of this is that I have to check menus, field complaints about Senior Common Room catering, and police our byzantine system of dining rights. It is not a salaried role, but I do get presented with a case of wine at Christmas. A PhD in Computer Science really doesn’t prepare you for such things...

Economics

Dr Damoun Ashournia writes:



Economics has had a very productive year at Hertford. The teaching team consisted of Roger Van Noorden Fellow in Economics David Gill, stipendiary college lecturer Richard Povey, departmental teaching associate Rustu Duran, and myself, career development fellow Damoun Ashournia.

It is an absolute delight to teach our Economics students, and we are proud of every single one. We currently have more than 30 students actively studying for papers in Economics at Hertford, across three schools: Philosophy, Politics, and Economics; Economics and Management; and Engineering, Economics and Management. Through the Hertford Business and Economics Society, our students continue to engage in advising and consulting organizations and businesses, putting into practice the skills they have acquired at Hertford.

Besides teaching our amazing students, the team pursued a number of interesting research projects. David Gill analysed experimental data in the field of behavioural economics, Richard Povey studied the evolutionary foundations of altruism, Rustu Duran continued to study systematic



biases in economic decision-making, while I studied the impact on wages in a developed country of international trade with low wage countries.

This summer, David Gill is leaving us to take up an Associate Professorship at Purdue University in America, and the entire economics team wants to thank him for all his hard work. He has been an excellent teacher and a wonderful colleague, and we wish him all the best for the future.

English

Professor Charlotte Brewer writes:



Over a third busy year as senior tutor, I have been grateful for the chance to return to research over the summer vacation, pursuing a long-term project on the mutually productive relationship between writers and dictionaries. I have published work on children’s dictionaries and on norms and margins of usage in English dictionaries, and worked on the Auden archive in the New York Public Library (Auden being an inveterate dictionary reader). Our students have flourished and we are proud to report excellent examination results, including three Firsts in finals.

“We are proud to report excellent examination results”

Professor Emma Smith writes:



Judi Dench once called Shakespeare “the man who pays the rent”, and I have often thought about that in this busy 400th anniversary of his death. I have published two books on Shakespeare’s First Folio and given a number of talks about them at literary festivals in Oxford, Hay and Edinburgh, and at bookshops, schools and universities around the UK and beyond. Copies of Shakespeare’s collected plays have drawn me to Buffalo, NY, and to the Scottish Isle of Bute, where, as described at the start of this issue, I had the excitement of authenticating a “new” First Folio. To my great delight, the extensive resulting press coverage was a symptom of the very over-investment in this fetish object that I discuss in *Shakespeare’s First Folio: Four Centuries of an Iconic Book* (Oxford University Press, 2016). As I shuttled between news outlets from Sky to Vatican Radio, the university press office told me that only the killing of Cecil the lion had been a bigger Oxford story. The Shakespeare celebrations also gave me the chance to work with the Bodleian, co-curating an exhibition called “Shakespeare’s Dead” in the new Weston Library gallery. I had great fun making a Radio 3 documentary about the First Folio. It’s been a running joke among my friends about when I will finally get to the Second Folio—be afraid.

It has been a bonanza year, but two things have been particularly special for me: I was nominated for an Oxford students’ union teaching award, and in



Emma receiving her award
(copyright Tom Rank for
National Association for the
Teaching of English)





July, I received an award from the National Association for Teachers of English (NATE) for “outstanding contribution to the teaching of English”. I dedicated this, Oscar style, to my own teachers and to the many Hertford English students who are teaching English in different contexts—to students, school pupils, refugees and native speakers of other languages, and in the UK and beyond—and especially to the three students in our class of 2016 who will be joining Teach First.

History

Professor Giora Sternberg writes, on behalf of the History fellows:



This year has seen several changes to History at Hertford. Roy Foster is retiring after 25 years as Carroll Professor of Irish History, marking an epoch of distinguished reputation and dedicated service. The Irish Chair has now been renamed in his honour, and Hertford welcomes Ian McBride who is joining the college as Foster Professor. During the first couple of years, he will be engaged in work funded by a Leverhulme Major Research Fellowship.

This year, Hertford welcomed Ingrid Rembold as junior research fellow, and Katharine Sykes and Liz Fink, who both joined the teaching team, while Christopher Tyerman and David Hopkin have been on leave. In the course of the year, Kate Sykes has been awarded a Career Development Fellowship and now moves on to a permanent position in Anglo-Saxon history at the University

of Birmingham. We are also saying goodbye to Luke Blaxill after three years as Drapers’ Company junior research fellow and dedicated lecturer in British History, as he takes up a Leverhulme Early Career Fellowship.

The college also celebrated the award of a Gibbs Prize to Max Dixon (2012, History and Politics) for the best finals performance of an undergraduate in a joint school with History in 2015.

David Hopkin is spending his Leverhulme-funded leave wandering from lace archive to lace archive. He has spent a month each in Normandy and the Auvergne this year, and is currently in Flanders. Christopher Tyerman’s book, *How to Plan a Crusade: Reason and Religious War in the High Middle Ages* (Allen Lane/Penguin), was published in September 2015 and became available in paperback in September 2016. He is now working on a study of the material culture of crusading for Yale University Press. Giora Sternberg has had a busy year at the college and the faculty, where he launched his new Further Subject, “Writing in the Early Modern Period”. He continues work on his related research project and will be working in France this summer thanks to a John Fell Fund Award.

“David Hopkin is spending his Leverhulme-funded leave wandering from lace archive to lace archive”



LIFE SCIENCES

Dr Alison Woollard and Professor Martin Maiden write:

This has been a bumper year for the Life Sciences family at Hertford, with six biologists, four biochemists, and five human scientists graduating, making for an extraordinarily well-attended schools dinner. The annual Darwin Dinner, for once actually held on the great man's birthday on 12 February, was very well attended., as ever From its relatively small beginnings, this annual gathering now includes current undergraduates and graduates, and those who have recently graduated. This year's dinner had a distinctly medical theme, with a pre-dinner discussion on postgraduate medicine, led by two Hertford human

scientists, one biochemist, and one biologist who had gone on to study medicine following their first degrees. The after-dinner speech was given by Hertford's very own Kay Davies, Dr Lee's Professor of Anatomy, with reflections on her own career path. Martin's term as tutor for graduates has coincided with the college adopting a more proactive policy on graduate recruitment and support, with Life Sciences as one of the areas that the college is planning to expand for graduates.

It has not (quite) all been about dinners... Defying the effects of the schools dinner the night before, an enthusiastic group of eight biologists and biochemists, afforced by two Hertford DPhil students from the Maiden Lab, set off at the crack of dawn (well at 8.30am, but it felt really



Life sciences schools dinner 2016 , left to right: Emma-Louise Heron (Biochem Part II), Rosemary Chamberlain (Biochem Part I), Mark Smyth (Biochem Part II), Eimear Monaghan (Biochem Part I), Joe Day (Biochem Part II), Shanlin Rao (Biochem Part II), Ewan Selkirk (Biochem Part I), George Summerton (Biology), Odile Harrison (Biology, SL), Sam Milliken-Smith (Hum Sci), Esther Hadman (Biology), Miriam Chapman (Hum Sci), Anna Hoyle (Biochem Part I), Leoma Williams (Biology), Helen Stain (Biology), Makena von Skepsgardh-Lohr (Hum Sci), Alison Woollard, Lily Goodyer Sait (Biology), Clive Hambler, Clare Hyde (Hum Sci), Lucie McMurtry (Biology), Martin Maiden, Izzy Evans (Hum Sci)



Down House, post-finals visit, 2016: Claire Barker (DPhil), Holly Bratcher (DPhil), Leoma Williams, Esther Hadman, Martin Maiden, Lucie MucMurtry, Helen Strain, Lily Goodyer Sait, Shanlin Rao, George Summerton, Emma Heron

early for most) for the annual post-finals pilgrimage to Down House in Kent, the home of Charles Darwin (see photo, where Martin can be seen proudly modelling a signature sleeveless sweater in Hertford colours, which was his leaving gift from this year's finalists). Enduring appalling traffic and dodging

the rain showers, we found time to complete the now traditional lunch in the tea room, as well as visits to the house, museum, and greenhouse (especially exciting for Lucie, this year's budding plant scientist), and the famous sand walk, where we all tried to have deep thoughts.

“ Martin’s term as tutor for graduates has coincided with the college adopting a more proactive policy on graduate recruitment ”



Biochemistry

Dr Alison Woollard writes:



It continues to be productive times for Hertford biochemists, with three Firsts from Part II finalists this year—a fantastic achievement that makes their tutor extremely proud! The fourth year of the course is greatly enjoyed by our students, as they get to spend almost the whole year as full-time scientists and valued members of research teams. This year, their projects spanned modern biomolecular science, from structural modelling of membrane proteins, through molecular mechanisms of DNA replication and repair to mapping human genetic disease. I am delighted to report that all four of them are staying in science, with three embarking on PhDs (Emma and Shanlin here in Oxford (and staying at Hertford, thank goodness!) and Mark taking the plunge and moving to Vienna) and Joe moving into science policy with a training position at Cancer Research UK. It is indeed wonderful to see our undergraduates moving so seamlessly onwards and upwards.

The Woollard Lab has also seen many comings and goings, with three graduate students finishing concurrently (Sophie Gilbert (Exeter), Karolina Chocian (Trinity) and Serena Ding (Brasenose), and three new ones coming in (Liisa Parts (Hertford—and newly elected MCR Secretary), Aidan Walker (Exeter) and Abigail Guillermo (Lincoln). Happily, all three finishers are staying in the field (and

two are still in the lab!), so there have been more welcomes than farewells. We have embarked on two new major research projects centred on the extremely diverse problems of neurodegenerative disease and agrochemical resistance. These two fields are unified by the fact that both present major difficulties for society: neurodegenerative diseases like Alzheimer's and Parkinson's represent an ever increasing health burden in an ageing population, yet breakthrough compounds are not being delivered at anything like the required rates, and agrochemical resistance is to the agricultural and food security sectors what antibiotic resistance is to the pharmaceutical sector—a growing challenge that is becoming difficult to ignore. In both areas, new model systems are being developed in which to seek new, blue-skies solutions, and the humble worm *C. elegans* has much to offer, hence my interest, as well as the interest of our funders (Innovate UK, BBSRC) and new industrial partners (Syngenta, Chronos Therapeutics). These projects, combined with our long standing interests in development and ageing, make for exciting times in the lab—tempered a

“ We have embarked on two new major research projects centred on the extremely diverse problems of neurodegenerative disease and agrochemical resistance ”



little recently by the disappointment and anxiety that has gripped the scientific community in the wake of Brexit. We live in interesting times, certainly, and look forward to the new academic year with a mixture of apprehension, excitement and a steely determination to make what we do count.

Biology

Professor Martin Maiden writes:



One of the delights of teaching the Biology degree is the diversity of the people who take the course. This year was no exception, with the current batch of finalists having a wide variety of interests. Despite these differences in interests and approach, it has been wonderful to follow how they have grown as a group and supported each other over the course. The range of biological interests was well exemplified by their Final Honour School projects: while two of this year's finalists (Helen and Lily) worked in the Maiden Lab with Odile Harrison, Esther worked on breeding behaviour in chickens

(involving very early summer morning visits to Wytham), Leoma studied learning in human toddlers (in Oxfordshire), Lucie worked on plant roots, and George studied corals (for which he had to snorkel in Indonesia, poor chap!) The 2016 Biology finalists' diversity extended to their other activities, with a definite sports theme: Helen and George were enthusiastic participants in college sport, with Helen acting as sports officer for the JCR; Lucie is an enthusiastic competitive runner; and Lily took up powerlifting in her final year, representing the university in Minsk. Bibliophile Esther acted as an assistant librarian, while Leoma's artistic prowess was well known throughout college, and indeed university wide, as a regular contributor to the student popular science magazine *Bang!*

As a result of Martin's appointment as tutor for graduates, Hertford's Biology teaching has been strengthened this year by the appointment of Timothy Walker, the former Director of the University Botanic Gardens, and Odile Harrison, from the Maiden Lab, as college lecturers.

The Maiden Lab remained as busy as ever, with no fewer than five DPhil students successfully completing their theses this year: Eleanor Watkins (Merton); Dorothea Hill (Hertford, 2011); Helen Wimalarathna (Hertford, 2011); Holly Bratcher (Hertford, 2011); and Melissa Jansen van Rensburg (Merton). Both of the lab's major themes, on the bacterial genera *Neisseria* and *Campylobacter*, remain translational

“ Hertford's Biology teaching has been strengthened this year by the appointment of Timothy Walker, the former Director of the University Botanic Gardens ”



“hot topics”, with the Department of Health sponsoring work on the carriage of the meningococcus in the wake of the meningitis vaccine petition and the Food Standards Agency continuing to fund the surveillance of *Campylobacter* food-poisoning in Oxfordshire, and now also the North West of England. Both of these collaborative projects make extensive use of the bacterial genome analysis technology that the Maiden Lab has developed since Martin came to Oxford nineteen years ago. This work was recognized this year, both in the UK, by Martin’s election to a Fellowship of the Academy of Medical Sciences, and in the United States, by his election to the American Academy of Microbiology, the honorific body of the American Society of Microbiology.

Human Sciences

Dr Clive Hambler writes:



With our five finalists of 2016, we reached peak Human Sciences. It has been a pleasure and an experience to coordinate so many able people with so many interests. The dissertations were as diverse as they were important: Izzy on the evolutionary and cultural origins of humour, Clare on the unintended consequences of new laws on female genital mutilation reporting, Makena on the metallic risks or benefits of eating inner-city fruit, Miriam on gender differences in student volunteering, and Sam on male parental epigenetics and the risks of obesity in children. With finals

“All of our graduating students were keen environmentalists—and it’s been notable how often I meet them doing good things in the community”

behind them, I hope they will find the energy to publish key results.

All of our graduating students were keen environmentalists—and it’s been notable how often I meet them doing good things in the community (including dancing in the street with the diverse May Morning revellers so distinctive to Oxford). Some became a familiar sight distributing heaps of appetising local vegetables—between delivering heaps of thoughtful essays. Makena’s Lloyds scholarship was linked to voluntary work, and in turn she led the Oxford Hub volunteers as they did remarkably diverse community-spirited work round the city, in a dream team that included Miriam.

The degree course has introduced course assignment essays and an assessed presentation as replacements for the Human Ecology exam. This diversification and spreading the load (and marks) of finals into the second year was a very popular idea with past students, and desired by tutors, but it’s been tough for the current second years to fit in the work amongst the routine tutorials. It’s to be hoped the system can be improved with experience.

The admissions process now includes the TSA (Thinking Skills Assessment), giving an independently-marked element for the intensive process of choosing who amongst our extremely strong



applications to summon for interview. It's always great to see current Hum Sci students welcoming and helping the prospective and current applicants at Open Days and interviews.

My research on the habitats of Britain's threatened species progressed well, and by invitation of the British Association of Nature Conservationists (an umbrella for conservation groups in Britain) I published some of it in their journal ECOS, in the article "Evidence based or evidence-blind? Priorities for revitalising conservation". Since the mid-1980s, I have developed the argument for rewilding, and my research continues to support this as the key way to reduce extinction rates in Britain and globally.

My fieldwork continues to suffer from the delay brought about by breaking my collar-bone in that famous non-contact game, ultimate frisbee: unable to put in some quadrat marker pegs last year, I hope to get back into hammering wood into limestone this year—very therapeutic, I suspect, if the wild parsnips don't get me with their fearsome chemical defences.

I thank all my students and Hertford colleagues for collaborating to make peak Human Sciences a high-point of satisfaction in an already highly worthwhile job. I look forward to the world becoming a better place even sooner!

Management

Dr Steve New writes:



I have continued my work on process improvement and supply chain management, presenting my findings at

the Tsukuba Global Science Week at the University of Tsukuba, Japan. Hertford's Business and Economics Society (including students studying PPE and Economics and Management) continued to undertake project work for external organizations: in December, as JCR President Ella Drake described earlier, a small group of students delivered a well-received report on the "The Implications of Wellbeing Research on Government Policy" to the Cabinet Secretary Jeremy Heywood (1980).

Mathematics

Dr Alan Lauder writes:



It has been an exciting few months in the Mathematical Institute, with, in close succession, two of my more senior colleagues winning "million dollar" prizes for their work (Abel and Shaw Prizes), and a new Regius Professorship in Mathematics being created to mark the Queen's 90th birthday. It is very stimulating to be surrounded by so many great minds at the institute. Our Shaw Prize laureate (Nigel Hitchin) was co-supervised in his doctoral studies in geometry by my predecessor at Hertford, Brian Steer (many moons ago), and the Mathematical Institute itself has at the helm Martin Bridson, a proud "Tanner boy" who studied here in the early 1980s (see Martin's article further in this magazine).

Alumni in mathematics should be sure to make a trip to our fabulous new premises next time they are in Oxford—it is decorated with some beautiful artwork, such as the Penrose tiled entrance



Maths Institute

courtyard, and has an excellent cafeteria into the bargain. Turning from the department to college, I have seen rather less of my students than usual this year, owing to being on sabbatical in Tokyo during Michaelmas term.

Their breadth of talent, though, continues to impress me. This term alone, two of our musical mathematicians gave solo recitals in the college chapel. It is a real pleasure to see them making so much of the rich cultural and sporting life which Hertford and Oxford have to offer. One wonderful recent innovation of our students is the annual Hartfest, a celebration of all the arts in early May, bringing the college to life with music and dance. I learnt from this that one of our mathematicians was a skilled tap dancer—the first tap dancing mathematician I have taught in my thirteen years at Hertford.

Apart from teaching in college, and lecturing in the institute, I have spent my working days trying to unpick some knotty problems in number theory, with, of course, much help from my collaborators in Barcelona, London and Montreal.

It is always a good idea to choose very clever collaborators, and ideally ones in nice locations. My collaborators' universities have "research institutes" in the Pyrenees and Barbados—mathematicians need to work in beautiful surroundings to think deeply, naturally. Indeed, there can be few more beautiful locations to work in than Hertford's old quadrangle, or the new Mathematical Institute.

Medicine

Professor David Greaves writes:



My laboratory in the Sir William Dunn School of Pathology studies the initiation and resolution of inflammation. Inflammation is the normal response of all tissues to injury and infection. Many human diseases, such as rheumatoid arthritis and psoriasis, are caused by a failure to properly resolve inflammatory responses. By studying the basic biology of inflammation, we aim to identify new pathways that can be targeted to develop novel anti-inflammatory drugs. Recent work in my laboratory has revealed a previously unreported role for the cannabinoid receptor CB2 in controlling inflammatory responses.

This year, my lab received funding from the Novo Nordisk Foundation to extend our studies into the area of immunometabolism, looking for links between changes in metabolism and activation of the innate immune response. I am pleased to be part of a research consortium that brings together scientists and clinicians from Oxford, Copenhagen and Stockholm to work on an important disease process that underlies the development of Type II Diabetes and cardiovascular disease.

Work from my laboratory has been published in peer-reviewed journals, including the *Journal of Immunology*, *Atherosclerosis*, *Immunity* and *Scientific Reports*.

One of the highlights of Hertford College academic life (for me) is the



L-R: Keziah Austin (2007), David Greaves (tutorial fellow 2002-), Joshana Guliani (2010), Simon Brewster (senior research fellow), Elizabeth Platt (2010), Sujata Biswas (lecturer in Oncology), Rebecca Sitsapesan (tutorial fellow 2013-), Nikita Sarania (2010), Patrick Garfjeld-Roberts (2003; lecturer in Surgery and Anatomy), Nic Patni (2013), Antonia Lloyd Lavery (2002), Louise Wing (lecturer in Radiology and Anatomy), Holly Roy (lecturer in Neuroscience)

schools dinner, where the Hertford pre-clinical and clinical tutors host a dinner in honour of our finalists. This year, we invited our two third-year students David McCaffray and Nic Patni and our sixth-year medics Nikita Sarania, Joshana Guliani and Elizabeth Platt to dine with us in the Lower SCR.

Modern Languages

Dr Katherine Lunn-Rockcliffe writes:



I have been on research leave for part of this year, drafting a book on Victor Hugo's poetry of progress, which is

a study of how he condenses many of the big questions of his age into metaphors: he depicts progress variously as a devouring monster, a growing tree, and a contradictory "luminous disaster, which falls like a bomb and remains like a star". Against the backdrop of the EU referendum, I have been studying the visionary expression of his hopes for a future unified Europe. On 14 July 1870, he wrote a poem called "On planting the oak of the united states of Europe", and that tree is still thriving in the garden of his Guernsey house.

Victor Hugo was very much heir to Enlightenment values, and Voltaire and his contemporaries seem more relevant than ever in the wake of terrorist attacks in France. Last year, we used our fortnightly unseen classes in Trinity term to collaborate in a project to translate eighteenth-century texts into English. College French classes across Oxford participated in the translation of an anthology of writings on the theme of



tolerance, put together by the Société Française des Études du Dix-huitième Siècle in response to the Charlie Hebdo assassinations in Paris. The translation was coordinated by Caroline Warman at Jesus College, and Hertford took on passages about religious tolerance by Bernardin de Saint-Pierre and Parny. The complete anthology in English was published this year and can be read for free at: <http://www.openbookpublishers.com/product/418/tolerance--the-beacon-of-the-enlightenment>. It is not only important that these authors remain at the heart of the Oxford course, but also that they remain accessible to the wider English-speaking world.

Dr Kevin Hilliard writes:



I published an article on religious poetry in the eighteenth century, with special emphasis on the work of Barthold Heinrich Brockes and Friedrich Hölderlin.

The German reading week in March, in its customary Frankfurt location, gave this year's group of finalists the chance to revisit some eighteenth- and nineteenth-century works in the morning and afternoon working sessions. We went to the theatre on three evenings, taking in Georg Büchner's *Woyzeck* and his *Leonce und Lena*, as well as a particularly gripping production of Heinrich von Kleist's *Penthesilea*. Rarely has the war between the sexes been portrayed so graphically and with such intensity.

No visit to Frankfurt by a group of Germanists would be complete without



German reading party, 19 March 2016



a pilgrimage to Goethe's birthplace, which duly took place: Hertfordians Erin Goldfinch (2012, second from the left) and Liz English (2012, second on the right) can be seen in the commemorative photograph. No less essential is the sampling of the local cuisine. Another photograph documents the occasion, where we were joined by ex-Hertfordian Joanna Raisbeck (2009, third left), now a graduate student on a scholarship which brought her to Frankfurt for the year. The stoneware jug in the foreground contains *Äppelwoi*, the cider produced in the region, which was duly tasted and approved.

It was very gratifying to receive the OUSU Award for Most Acclaimed Lecturer in the Humanities, 2016.



Oriental Studies

Professor Bjarke Frellesvig writes:



My office as Chair of the Faculty of Oriental Studies came to an end in September 2015, and so from the beginning of this academic year, I have returned to more or less normal academic life. This has included being on sabbatical leave in Hilary and Trinity terms of this year, enabling me to catch up on writing some long overdue articles. During my leave this year, my teaching in college and faculty was covered by Dr Kerri Russell, who looked after our Orientalists very well. We thank Kerri for her service and wish her all the best.

In January, I visited Tokyo briefly, to give a series of lectures on Japanese historical linguistics at the University of Tokyo. I spent the greater part of this summer in Tokyo at the National Institute for Japanese Language and Linguistics (NINJAL), pursuing collaborative work on early Japanese grammar, based on the Oxford Corpus of Old Japanese, in combination with the diachronic corpus of pre-modern Japanese at NINJAL. The good relations we have with NINJAL also benefit our graduate students, several of whom have visited there, including most recently our DPhil student Maria Telegina

(2014), who conducted a series of psycho-linguistic experiments at NINJAL in January and February this year. We also have a close connection with Kobe University, at which all undergraduates in Japanese spend the second year of their course.

Oriental Studies at Hertford continues to thrive. For quite some time now, we have accepted students only for the two East Asian subjects (Chinese and Japanese) within Oriental Studies, as that is where we have our expertise and can look after our students. While applications to Japanese Studies degrees are declining in most of the UK universities that offer Japanese, this is not the case in Oxford, and, in particular, not in Hertford. For admissions in Michaelmas in 2015, we had 24 applications for Japanese, for five places. This is not a large number in absolute terms, but the applicants to Hertford last year made up just under half of all the applications (54) for Japanese in the university, confirming our position as the largest undergraduate college for Japanese in the university. Together with our postgraduate students in Japanese, they are all part of, and benefit from, the strong and lively community we have built up in Hertford of students of Japanese and Chinese over the past more than fifteen years.

Dr Jieun Kiaer writes:



Last year, I finished *The Routledge Course in Korean Translation*, due to be published in March 2017, material

66 Oriental Studies at
Hertford continues to
thrive 99



from which was used in teaching the Korean translation courses at Oxford. This research also contributed to running the “translating translation” seminars, which have been ongoing since 2012. I delivered a paper on translating emotions and interpersonal relations in modern Korean literature at the Oxford Comparative Criticism (OCCT) in March this year and have hosted a number of translation-related seminars, to which translators such as Deborah Smith contributed. In addition, I have given talks at a number of seminars and conferences in Korea, Belgium, Denmark and the UK on attitudes towards multilingualism. Presently, I am finalizing a manuscript on this subject, entitled *Translanguaging: towards our languages* (Palgrave), to be published later this year.

Philosophy

Professor Peter Millican writes:



Philosophy at Hertford continues to thrive academically, with strong results overall, and a series of particularly excellent performances over the last three years: picking up university Gibbs Prizes in Computer Science and Philosophy (Ben Dawes, 2012, who also won a Hoare Prize), Philosophy and Modern Languages (James Hutton, 2009), Physics and Philosophy (Zoe Holmes, 2011), Psychology and Philosophy (Noemi Dreksler, 2010), as well as a dissertation prize for Noemi Dreksler and the Philosophy thesis prize for Matthew Clark (2010). The last crop of first years also

“The last crop of first years also did wonderfully, with the nine Hertford PPEists averaging five marks above the distinction threshold (22 ahead of the average of the other colleges!)”

did wonderfully, with the nine Hertford PPEists averaging five marks above the distinction threshold (22 ahead of the average of the other colleges!), while Jenny Yang (CSP) and Will Barnes (PPE) took the new university prizes brought in by the Philosophy Faculty for first-year performance. Such was our strength in depth that we also provided the runners-up—Mahmoud Ghanem (CSP), Khai Yen Chew and Younes Saidani (PPE)—while our total of eight distinctions was completed by Callum Tipple (PML), Libera Assini and Ruairidh South (PPE).

A number of our recent students have continued with Philosophy at postgraduate level, four through the Oxford BPhil (Hsueh Qu (2006), Will Clark (2007), Matt Clark (2010), and Kim Engel (2013)) and three through a link we have developed with the Central European University in Budapest (James Hutton (2009), Isabel Patkowski (2010), and Dan Hartas (2010)). Qu went on to pursue a PhD at New York University, and has recently been appointed to a permanent post at the National University of Singapore (specialising, to my delight, in David Hume). James is now studying for a doctorate at the “Other Place” in the Fens, while Simone Webb (2011)—following an excellent in PPE and an MST



in Women's Studies at Oxford—is now doing a PhD at UCL, focusing on some unjustly neglected early modern women philosophers. The list would be much longer if it were also to include those ex-philosophers who have gone on to further study in related subjects (including Computer Science, Economics, Physics, and Politics).

I am very grateful to have had the excellent help of Dr Patrick Butlin, as lecturer in Ethics and Philosophy of Mind, and Dr Henry Merivale, who combined outreach and teaching roles (especially in Logic and Language), over the last two years. Sadly for me, both are now leaving the college; Patrick to a research position in Antwerp, and Henry to complete various publishing projects, including what I am sure will be an excellent and influential book on the most significant of David Hume's works yet to be studied in such depth (the Four Dissertations of 1757). Oxford is fortunate to be able to attract such talented young researchers to what are very modestly funded positions, and without their willing commitment, the teaching load would be unsustainable. Even as things stand, the load for established postholders at Oxford is such that it makes it hard to retain younger academics for whom the pressures to build a research career are

huge. Hertford now has over 40 students on combined Philosophy degrees at any one time, significantly more—I believe—than in any other single-fellow college. However, the costs of any new post are of course considerable, and I would be delighted to hear from any alumni who might be happy to help me in putting together an initiative to find matching funding that could persuade the faculty to support another post here. By 2025, when I am due to retire, I would very much like to be able to leave the college in a good position to continue its strong performance in Philosophy.

It has been some time since we had an old members' event for the Philosophical Society, and I am now inclined to think that it would be best to have some relatively fixed time in the calendar, to try to ensure that one takes place every year. These events are a great opportunity for mixing between current and old students, to the benefit of both, and I would be grateful for suggestions as to when is likely to be best for alumni. With the Philosophy Retreat in the Cotswolds still going strong (now in its seventh year), the end of the Easter vacation would be difficult, but maybe around the end of Hilary term would be a good time—views welcome!

As I write this, I am flying out to New York for a workshop on the Ethics of

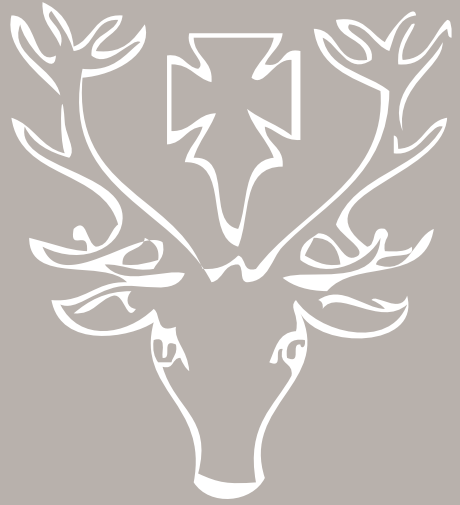
“Recent graduates will know that I spend a lot of my time doing outreach visits and talks, often to raise awareness of the innovative degree in Computer Science and Philosophy, of which Hertford is the focal point”



Artificial Intelligence, organized mainly by former Hertford lecturer Paula Boddington, now working on a related project led by Mike Wooldridge (Professor of Computer Science) and me. Recent graduates will know that I spend a lot of my time doing outreach visits and talks, often to raise awareness of the innovative degree in Computer Science and Philosophy, of which Hertford is the focal point. Interest and application numbers have been growing fast—with a 70% rise in the last cycle—but there is still a lot to do, and Oxford has not yet had a sufficient number of strong applicants to recruit to our planned targets (though this year came much closer than ever before). With this in mind, I used Hertford’s Janeway funding to bring the annual international Bebras informatics competition to Oxford (and Hertford) this year, and devoted the “Philosophy Plus” strand of the recent Hertford Summer School (the brainchild of our Outreach fellow Catherine Redford) to helping bright sixth-formers from “access” backgrounds develop their mathematical and logical skills in preparation for our demanding aptitude tests in Mathematics, Physics and Computer Science, all of which can be combined with a Philosophy degree.

I haven’t said much here about my research, though that too has been going well, with recent publications on John Locke (on substance), David Hume (e.g. on causation, ethics, induction, miracles, and the development of his philosophy), artificial intelligence, and the philosophy and psychology of religious experience. Two of these recent papers were joint with two different colleagues from Hertford (Branden Thornhill-Miller and Mike Wooldridge), while a planned edited collection will be a joint paper with Mike Wooldridge and Paula Boddington. Hertford remains a wonderful place to do philosophy, both with students and colleagues.





AFTER
HERTFORD



Mathematics at Oxford

Martin Bridson (1983)



Martin Bridson has been the Head of Oxford's Mathematical Institute since 2015. He read mathematics at Hertford from 1983 to 1986 and received his PhD from Cornell in 1991. He subsequently held positions at Princeton, the University of Geneva, Pembroke College Oxford, and Imperial College London. Since 2007, he has been the Whitehead Professor of Pure Mathematics at Oxford and a fellow of Magdalen College. A recipient of the London Mathematical Society's Whitehead Prize and the Royal Society's Wolfson Research Merit Award, he is a fellow of the American Mathematical Society and was an invited speaker at the quadrennial International Congress of Mathematicians in 2006.

The thirteenth-century Oxford scholar Roger Bacon wrote: "He who knows not mathematics cannot know the other sciences nor the things of this world... A knowledge of this science prepares the mind and raises it up to a well-authenticated knowledge of all things." But what do research mathematicians do all day, and why would someone dedicate their life to mathematics?

It is odd how often educated people

ask: "Don't we know everything there is to know about mathematics?" It is not a question that people would ask about biology or computer science. Mankind's knowledge of mathematics expanded to an extraordinary extent in the twentieth century, but the frontiers of what we do not yet know are everywhere one looks: there are easily stated problems from antiquity that continue to defy us, such as whether every even number is the sum of two prime numbers, and there are endless layers of fundamental problems whose importance only emerges from an appreciation of the previous generation of insights, or from the demands of new directions in science.

But the infinite extent of what we do not know does not detract from the fact that the edifice of modern mathematics is probably the greatest coherent creation of the human mind. While its inherent logic and beauty can beguile, its power drives the models from which scientists, medics, engineers, economists and social scientists build an understanding of our world and marshal visions of the future. Progress at the frontiers of science and technology draws heavily on the great toolkit of mathematics, making demands that reach deep into the core of the discipline. For example, a part of number theory that was divorced from applications 30 years ago is now at the heart of all internet security. This is just one illustration of the fact that applications of enormous societal importance can arise from mathematics that was done decades earlier, driven not by a specific application but by the insatiable human urge to solve hard, natural problems—because not knowing is a state that we cannot abide.

As a boy in the Isle of Man, I did not know anybody who had been to university and I had no inkling of the excitement of intellectual life, but I certainly didn't lack curiosity. I was determined to become a sailor and see as much of world as I



Martin in Rio de Janeiro, Brazil





could. My life was transformed by coming to Hertford: my world expanded beyond imagining, my reflex for anticipating glass ceilings was broken, and everything seemed possible. My story is a familiar one in the Hertford context: I was a Tanner boy; my brother and I were the first in our family to have the opportunity for post-16 education; I was the first from my comprehensive school to come to Oxford. A dedicated maths teacher, Henry Corlett, taught me and my mate Angus Further Maths in our lunchtime, but I could not have sat the entrance exam. My path to Oxford was due entirely to the Hertford scheme and the confidence that my tutors, Brian Steer and Alan Day, showed in me at interview. (Every detail of that interview is still burned into my memory!)

My transition to graduate school was a much more random affair. In Hilary term of my third year, I rejected the career in finance that I'd been drifting into, preferring travel and mathematics. My life as an undergraduate had been the usual mixture of study, sport and socialising, and it was only near the end, as things came together, that I developed a deeper passion for mathematics. The deadlines for applying to American graduate schools were well passed by then, but with Brian Steer's encouragement I wrote directly to a handful of mathematicians. That led to the offer of a place at Cornell, in upstate New York, with a stipend as a teaching assistant. Landing at Cornell was a remarkable stroke of luck. There

was a welcoming and very active topology seminar there at the time, which captured my interest and drew me into two fantastically fertile areas of mathematics at just the right moment: the classification programme for three-dimensional spaces initiated by Bill Thurston, who would later be instrumental in bringing me to Princeton, and a newly-emerging area of mathematics at the interface of geometry and group theory, stimulated by a series of remarkable essays by Misha Gromov, a Soviet mathematician who had recently moved to the US. This new area cohered into a subject called geometric group theory. I benefitted enormously from being involved in the early days of the subject, as it grew rapidly and provided new tools that solved longstanding problems across a wide range of mathematics.

When I was elected a Fellow of the Royal Society earlier this year, the citation's main claim was: "Bridson has played a leading role in establishing geometric group theory as a major field of mathematics."

Mathematics is a thoroughly international pursuit. In the early part of my career, I lived in the US and Switzerland. Later, I spent extended periods in Australia, New Zealand and the Far East, and I am familiar with most of the academic hubs of the world. Mathematicians move easily and frequently between jobs in different countries and we gather for

“Mathematics is a thoroughly international pursuit”



conferences constantly. It is a terrifically stimulating community to live in, with an endless array of fascinating characters. It's a great substitute for the life at sea that I anticipated as a boy.

It is easier to describe the trajectory of the lives of mathematicians than it is to explain to a general audience why their work counts for something, but I want to say a little more about the content of what I do. My interests span geometry, group theory and topology. Geometric group theory is a many-faceted mingling of these classical subjects. Above all, I am interested in the nature of symmetry. The symmetries of any structure define an algebraic structure called a group, and since the importance of symmetry pervades all of mathematics and much of the world beyond, the theory of groups is a vast and important subject. Geometry, in its many guises, is equally ubiquitous, and in the twentieth century, it became deeply intertwined with topology, which is the study of geometric properties that are preserved under continuous deformations.

One recurrent theme in my work is the quest to identify and exploit manifestations of curvature in non-standard settings. Another is the desire to develop and explore measures of complexity that lend precision to the idea that problems, particularly geometric ones, can be graded according to their hardness, and in some cases can be proved to be unsolvable. I have grappled repeatedly with the difficulty of describing the universe of all finitely-definable groups. In the last ten years, I have been particularly preoccupied with the struggle to understand the extent to which infinite groups (systems of symmetry) can or cannot be understood via their actions on finite objects.

My enthusiasm for doing mathematical research and conveying its excitement to students remains undimmed,

but in 2015, I became Head of the Mathematical Institute in Oxford, and that has concentrated my thoughts on the more worldly aspects of promoting mathematics.

The institute has many unique features. One is the way in which Oxford embraces the power of the interactions between pure and applied mathematicians in one department, nurturing collaborations across academia and beyond. We have 180 faculty research fellows and postdoctoral researchers working across all fields of mathematics, from number theory, geometry and mathematical physics to the challenges of big data and models for understanding financial markets and the mechanics of the human brain. The faculty has doubled in size since 2001, and we have over 1,000 students. It is a tremendously exciting place to work, not least because at its core is a principle that it shares with Hertford and all great academic institutions: we don't care what your origins may be, we care only about your ability and your passion for your subject, and we demand excellence.

Two years ago, the Mathematical Institute moved from a scattering of nondescript sites across Oxford to a magnificent new home on the site of the old Radcliffe Infirmary. It is still thrilling to enter the Andrew Wiles Building each day and sense the intellectual excitement all around you. It is a bold statement about the importance of mathematics in Oxford. The design of the building inspires people to come, stay and interact: our pure and applied mathematicians talk to each other more than ever before; our undergraduates no longer run off to their colleges as soon as lectures are over; we draw large audiences of school children, alumni and friends to our public lecture series; and we are able to host large conferences. The world's leading



mathematicians are keen to visit and the sense that Oxford is one of the great crossroads of world mathematics has intensified.

Oxford's reputation for mathematics is stronger than it has even been: it is one of the powerhouses of the subject globally. In the government's 2014 Research Excellence assessments, Mathematical Sciences in Oxford was ranked first across the UK in all categories. This year, we were awarded a Regius Professorship to mark the Queen's 90th birthday (the first Regius chair awarded to Oxford since

1842) and two of the great prizes of world mathematics were awarded to members of our faculty: the Abel Prize to Sir Andrew Wiles and the Shaw Prize to Nigel Hitchin. For the second year running, three of our faculty members were elected fellows of the Royal Society. Our students are in huge demand, and the future has never looked brighter.

It is a huge privilege to be Head of the Mathematical Institute at such a special moment in its history. "What then?" sang Plato's ghost. "What then?"—I don't know, but it will be great.

“It is still thrilling to enter the Andrew Wiles Building each day and sense the intellectual excitement all around you”



Sadarghat Port in Dhaka, Bangladesh

International law Rajkiran Barhey (2011)



Rajkiran Barhey studied Law at Hertford from 2011 to 2014, before going to New York University on a Fulbright scholarship.

For the past two years, I have been travelling around the world, experiencing

the study and practice of law in different places and having a few holidays along the way. Law post-Hertford has certainly been very different—I've learnt much more about law's connection to justice and social movements and have had a more practical education. Life post-Hertford has also been very different—although I've kept many of the same friendships, I've had to immerse myself in new communities time and time again.

Italy (August – October 2014)

I began my journey post-Hertford by travelling to Rome, where I completed a three-month internship at the World Food Programme. (WFP) I was based in the department which dealt with employment disputes between the UN and its employees. Amongst the different UN agencies, WFP is relatively unique in that it requires most of its staff to serve on the frontline in places such as Syria, Iraq, and Somalia, which raised some interesting



employment issues.

Living in Rome was a fantastic experience. I shared a flat with a Greek contemporary dancer named Hippocrates and a polyglot Hungarian air hostess in the piazza next to the iconic Santa Maria in Trastevere, one of Rome's oldest churches, and spent the days eating every flavour of gelato (white chocolate and basil, anyone?) and marvelling at Rome's abundant art and history.

Bangladesh (January – April 2015)

Moving from one of the world's most beautiful cities to, and I say this with fondness, one of the world's ugliest, was quite a shock. Before I even arrived in Dhaka, I got a taste for what was to become a familiar experience when I was asked to move my flight back a few days because of a planned strike (colloquially known as hartals). Hartals are associated with political violence, especially towards vehicles, so it wasn't the best time to arrive in a new city. I couldn't change my flight, but thankfully avoided any Molotovs on the way to my new flat.

Despite the bumpy start, I had a fantastic time at the Bangladesh Legal Aid and Services Trust (BLAST). BLAST is a legal NGO that provides free legal aid for the poor and disempowered, campaigns for progressive changes in the law, and educates individuals about their rights.

During my time there, I worked primarily on a report on the right to food—a human right recognised by international law. Inspired by a similar movement in India, a group of campaigners in Bangladesh wanted the Supreme Court to legally recognise the human right to food in Bangladeshi law, and Parliament to enshrine certain basic entitlements to food in law. A key idea behind the campaign was that recognising government provision of food to the poor as satisfaction of a legal right to food, rather than a policy choice, was empowering for the recipients. Furthermore, if the government failed to

provide food, individuals would have a legal remedy.

I was lucky to be joined in Dhaka by a fellow Hertfordian—Rhys Owens (2011). Together, we explored the streets and rivers of Old Dhaka, bought a much awaited legal G&T at the British Embassy club and ate baguettes at the now destroyed Holey Artisan Bakery.

Political violence caused by a decades-long clash between the ruling Awami League and the opposition BNP (and its allies) was a constant threat during our time there and the pattern of hartals, petrol bombs and deaths became a terrible routine. Recent news reports have focused on apparent religious motivations behind high-profile killings, but I urge anyone interested to learn more about Bangladesh's political history to understand the situation.

India (April – May 2015)

After Dhaka, I flew to Amritsar to join yet more Hertfordians—Andrew Dickson and Omer Sheikh Mohamed (both 2011)—for a month-long trip in India. We travelled over 2,000 miles, from Amritsar, up into the Himalayas, back down through Delhi, Agra, and through the Indo-Gangetic plain, visiting the pilgrimage sites of Allahabad, Varanasi and Bodh Gaya before finishing in Kolkata. The highlight was definitely the time spent in the Himalayas, appreciating the beautiful countryside as well as the strange mix of people it attracted—Westerners coming to “find themselves”, refugees from Tibet, local people and a young English man called Rob, who taught bridge for a living.

United Kingdom (May – June 2015)

After India, I had a brief stint in London working at the British Institute for International and Comparative Law, where I spent most of my time researching the government's plans to repeal the Human Rights Act and reform judicial reviews.



NYU's All-University Commencement ceremony, attended by over 8,000 students at Yankee Stadium. The ceremony was presided over by ex-Oxford Vice Chancellor and new NYU President Andrew Hamilton





The New York Financial District in
south Manhattan



Both developments are deeply worrying and form part of a broader attack upon aspects of our constitution which, for years, we have taken for granted as being stable.

United States (August 2015 – May 2016)

Following London, I flew to the United States in August to begin my LLM at New York University. My degree was generously funded by scholarships from the Fulbright Commission, NYU and the BUNAC Trust. I had considered coming back to do my Master's but I chose NYU because of the range of subjects I could study, the different way in which law is taught and the chance to live in New York.

One of the things I most enjoyed about being a Fulbright scholar (other than the money, of course!) was the opportunity to meet a fantastically diverse group of people from around the world—from doctors to Iranian classical musicians to dancers.

NYU itself did not disappoint. I was able to study a huge range of subjects, including economic and social human rights law, a comparative seminar on national security law, critical race theory and reproductive rights law.

I was lucky enough to be lectured by Philip Alston, the current UN Rapporteur on Extreme Poverty and Human Rights and a previous member of the UN Committee on Economic and Social Rights. Professor Alston is well known in the field of human rights for arguing that rights to housing, healthcare, education, food and water are human rights of equal status to classic civil and political rights, such as free speech and fair trial rights. He encouraged us, as lawyers, to fight for the satisfaction of such rights by, for example, advocating for fairer economic policies. It was the first time that I had encountered a professor who pushed law students to engage with such politically charged



questions, and it certainly differed from the way I had learnt human rights law at Oxford.

I also worked on two ongoing constitutional cases for NYU's Reproductive Rights Clinic. One case concerned a pregnant woman who was imprisoned for refusing to submit to drug addiction treatment. Although she did not have a drug addiction, she was required to have the treatment because she had admitted past drug usage to her doctor. She was treated worse than a criminal and imprisoned without any legal advice or access to medical care, despite having a thyroid problem (which is dangerous during pregnancy if left untreated). We were challenging her treatment as well as the whole law to try and prevent this from happening to more women.

My main jobs were to research legal points, draft briefs which were filed with the court, help plan questions to ask witnesses and trawl through evidence to look for clues that could support our case. Hands on, clinical teaching is a common feature of American law schools, but is rare in the UK. My experiences of it were fantastic—I developed skills that would be incredibly useful in the workplace, and it was motivating knowing that the work I was doing was being used in a real-life case.

One of the best things about NYU, which also differed from Oxford, was the strong presence of legal practitioners in the faculty. I took a course on national security, for example, which was taught by a former President of the Israeli Supreme Court and the ex-General Counsel to the FBI. It was eye-opening to hear, first-hand, about the dilemmas faced by such people in genuine national security emergencies. Hearing their stories made me question some of my positions on controversial issues such as preventative detention and torture, and challenged my cynicism towards the security services and the government.

The cultural highlight of my time in New York was undoubtedly seeing the wonderful New York Philharmonic. I was also lucky enough to visit the Met Opera and explore the Metropolitan Museum, the Museum of Modern Art, the High Line, Broadway and more. The food in New York was also fantastic—just on my neighbouring street, I could find cuisine from Ethiopia, Vietnam, the Middle East, India, and Italy.

Another highlight was travelling around the US. The famous fall foliage was stunningly beautiful, whilst Washington D.C. epitomised stately elegance. I took a trip down to the south, passing through Texas, Louisiana, Mississippi, Alabama, Georgia, Tennessee and Arkansas, and experienced a completely different side of a country I had grown to love. Every stereotype of the south that I had was, more or less, confirmed—it was full of cowboys, churches and guns, as well as friendly people who loved our accents, deliciously unhealthy food and brilliant music. I finished my trip in California, driving through hills covered in scorched grass and vineyards, and seeing the Golden Gate Bridge enveloped in the famous San Francisco fog, which blankets the city throughout summer.

The future...

The wig and gown has always been my dream and, after a final year of academic training, I will begin a pupillage at a set of barristers' chambers in London, hoping to focus on those areas of the law where I can make a real difference to people's lives. I do hope reading this has piqued the interest of some readers, and I am always happy to be contacted and chat about applications, scholarships, travel or anything else!



The 50th anniversary Gaudy for 1965 matriculands

Nick Keith (1965)

Hertfordians who matriculated in 1965 held a special 50th anniversary gaudy in September 2015. This was the seventh event of its kind, and 27 people attended the dinner in college—with some coming from Belgium, France, Germany and Switzerland.

There were 25 former undergraduates, and two former SCR members: Professor Keith McLauchlan FRS, (Professor of Chemistry, emeritus fellow, Hertford 1965-2002) was a guest of the chemists; and the late Dr Miles Vaughan-Williams (emeritus fellow, Hertford appointed 1953) was a guest of Graham Winyard. Will Hutton, the Principal, attended the pre-dinner drinks.

“It was great to entertain our distinguished guests and to see so

many familiar faces,” said Nick Keith, who, with Anthony Swing, has organized the seven gaudies. “We are grateful to the Development Office, who helped with the mailing, and to the college kitchen, who produced such excellent food and wine. The next gaudy for the ‘65ers will be in 2018—probably.”

The first 1965 gaudy was held at The Feathers, Woodstock, in 1988, to mark the 20th anniversary of graduating (for most of them). The only other gaudy where the dinner was held outside college was in 2003, when they ate in a restaurant called Next Door—next to the King’s Arms. Luckily, the organizers discovered in time that the restaurant booked (Ma Belle) had closed down!

Attendees in 2015: Dick Anderson, Andrew Blake, John Borradaile, Paul Buckley, David Cornwell, Jeremy Dawkins, Ivor Fiennes, Graham Griffiths, Richard Groom, Mike Henderson, Alan Hinchcliffe, Ian Holmes, Chris Inge, Nick Keith, Simon King, Rodney Nelson-Jones, Bob Payne, Stephen Potel, John Smart, Stephen Stowell, Anthony Swing, Steve Thompson, James Turtle, Paul Watts, Graham Winyard.

“We are grateful to the Development Office, who helped with the mailing, and to the college kitchen, who produced such excellent food and wine”



Births



Aidan Liddle with daughter Jennifer Elizabeth

Aidan Liddle (1997) and Helen Liddle's daughter Jennifer Elizabeth was born in Stockholm on 30 November 2015.

James Henderson (2003) and Sarah Henderson's first son was born on 28 January 2016, and we're reliably informed that Teddy looks forward to becoming a Hertfordian himself!

Marriages

Michael Davison (1981) married Jane Pollard (Exeter, 1984) at Monteton, Lot-et-Garonne, in May 2013. They spend as much time as they can at their house in France.

News

Stay up-to-date with the latest news from your contemporaries.

If you have news you would like to share with the Hertford community, please send it to the Development Office (development.office@hertford.ox.ac.uk), along with any photographs we could print. Please note that the Editor may edit any contributions.

1947

David Waddington tells us: "I have retired from the House of Lords, and I hope a lot more will follow my example."

1959



Hugh Sturzaker was awarded an MBE in the 2016 Queen's Birthday Honours for services to health and the community in Great Yarmouth, Norfolk.

1961

Rodney (Steve) Wilson's 21st book, *Big British Bikes of the 50s and 60s: Thunder on the Rocker Road*, was published in November 2015, with some help from fellow Hertford alumnus of 1961, Mike Sewell.

1966

J. P. Lusk's book, *The Jesus Candidate: Political religion in a secular age*, was published in October 2016.



1967

James Pettifer continues to teach modern Balkan History in the university History Faculty at St Cross College. His new book, co-edited with Tom Buchanan, is *War in the Balkans: Conflict and Diplomacy before World War I*, published in London and New York in 2016.

1968

Anthony Widdows writes: “My nephew, Nicholas Widdows (Exeter, 2001), was appointed chaplain of Magdalene College, Cambridge, in September 2015.”

1973

Robert Dodds’ second collection of short stories, *Secret Sharers*, has recently been published: “Nineteen stories: nineteen diverse characters who will share their closest secrets with you. The artist haunted by a mysterious Chinese boy who never speaks; the girl whose murdered sister whispers in her head; the geneticist trapped in the body of a sow; the old man baffled by a peripatetic building. This is a unique collection—sometimes funny, sometimes eerie, but always surprising. Robert Dodds has been published by Andersen Press (Random House), Polygon, and A&C Black (Bloomsbury). His short stories have

been anthologised by HarperCollins, and broadcast on BBC Radio Four. This is his second collection.”

1979

Denis Keefe has been ambassador to Serbia since 2014, and was appointed CMG in the New Year Honours 2016 for services to British foreign policy. He also tells us he had “a wonderful visit by Dr Stephanie West and Professor Martin West in April 2015, including a trip to Lepenski Vir.”

1980

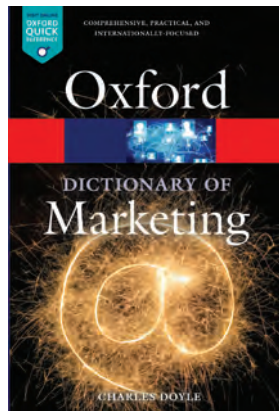
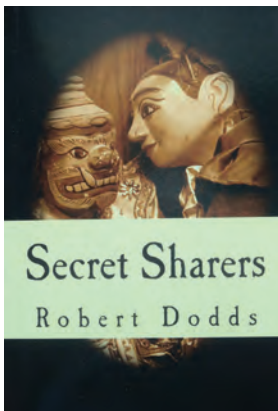
Charles Doyle published the *Oxford Dictionary of Marketing* (4th edition) in 2016, and also completed the re-branding of JLL (one of the world’s oldest companies) in 2015.

1981

Sukhvinder Kaur-Stubbs has published a report with the University of Birmingham on Building Contingent Capacity, a new framework for enabling organizations to become more responsive to the people they serve.

1981

Jonathan Ford published *Depression, Oil Trading and a Mind at War with Itself* in April 2016.





1982

Stewart Kennedy worked in a senior capacity at Bank of America, Merrill Lynch, Wells Fargo, BNP Paribas and China Construction Bank. He is now a drug and alcohol recovery worker, studying for an MSc in Addiction Psychology and Counselling.

1984

Victor Cha's book, *The Impossible State: North Korea, Past and Future*, was selected by Foreign Affairs as a "best book" on the Asia-Pacific. His new book, *Powerplay: The Origins of the American Alliance System in Asia*, was published by Princeton University Press in August 2016.

Mark Lemmon, the David A. Sackler Professor of Pharmacology and co-director of the Yale Cancer Biology Institute, was one of 52 scientists elected in 2016 as a fellow of the Royal Society, the United Kingdom's national academy of science.

Lemmon was recognized for his pioneering contributions to the fields of cell signalling and cancer research, with work that also addresses more basic and general questions in biochemistry and biophysics. His work has focused on the signalling mechanisms of cell surface receptor tyrosine kinases (RTKs) that, when mutated, cause cancers and other diseases. Due to his achievements, it is now well known how the prototypical RTK (epidermal growth factor receptor, or EGFR) signals across membranes. The results of his investigations are now helping to guide clinical decisions, bringing biochemistry and structural biology into personalized medicine.

1985

Stuart Munsch was promoted to the rank of Rear Admiral (Upper Half) in the United States Navy in July 2016.

1991

David Atkinson writes: "I am taking over as headmaster of one of the country's best grammar schools, Dr Challoner's GS in Amersham, at the start of the academic year in September 2016. We send lots of students to Oxford, and have at least two at Hertford at the moment, which I am particularly proud of as a former student of the college myself."

1995

Stephen Frost has written a new book, with Danny Kalman: *Inclusive Talent Management: How business can thrive in an age of diversity*.

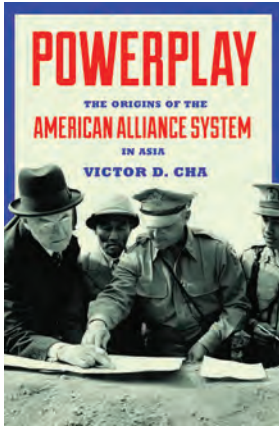
<https://www.koganpage.com/product/inclusive-talent-management-9780749475871>

1997

Greggor Mattson writes: "This year, I was promoted with tenure to Associate Professor of Sociology at Oberlin College, Ohio. My book, *The Cultural Politics of European Prostitution Reform*, also appeared from Palgrave Macmillan Press. Case studies of the first four EU countries that reformed prostitution, the Netherlands, Sweden, Germany, and Finland, are told through 90 in-depth interviews with people who helped craft, implement, or enforce new prostitution policies. Departing from previous accounts that stress the differences within these debates, *The Cultural Politics of European Prostitution Reform* instead analyses their commonalities, foregrounding the increasing moral power of the state in a globalizing world and the endurance of national cultural difference."

1999

Tim Bray tells us: "I would like to thank everyone for their support this year in getting me back to UK. I was lost in the Middle East for a year, and then effectively in jail in Eastern Europe after



the initial escape via Russia. The Ukraine wasn't fun. That will teach me to go looking for archaeological gems in a war zone. I hope my wife will be able to join me soon."

Gabriel Packard had his debut novel, *The Painted Ocean*, published this year by Little, Brown. It's a dark literary adventure in the tradition of *Lord of the Flies*. National Book Award-winner Colum McCann has described it as a "fearless tour de force. It is a rare achievement—an emotionally rich work of literature, delivered in the form of a gripping, page-turning story." The paperback version has been selected for WHSmith's "Fresh Talent" series.

2002

Paul Clarke was the winner of an NCE Tunnelling Award in 2015, following his work as project manager for the track lowering of Brunel's 175 year old, 3km-long, iconic Box Tunnel.

2003

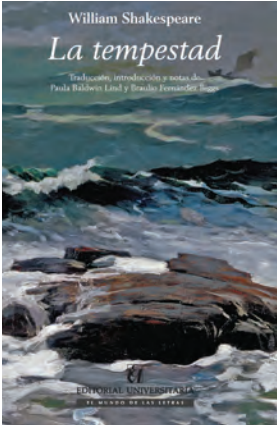
Paula Baldwin is a lecturer and researcher in English in South America, Universidad de los Andes, Santiago de Chile: "My research is on female spaces

in Shakespeare and translation of his works into Spanish. The translations are in standard Spanish and follow the models of Arden, Cambridge and Oxford editions; that is to say, they include a research-based introduction and a good number of notes. I have already translated (with my colleague Dr Braulio Fernández) *The Tempest*, *Twelfth Night* and have just finished *King Lear* (in print). I have also just edited a book on literary adaptations to film for Cambridge Scholars Publishing (see photos).

Daisuke Nagai has published Japanese translations of *Tocqueville's Discovery of America* by Leo Damrosch (Tokyo, 2012), *Adam Smith: An Enlightened Life* by Nicholas Philipson (Tokyo, 2014) and *David Hume: The Philosopher as Historian* by Nicholas Philipson (Tokyo, 2016).

2008

Kunwar Sandal has been appointed ambassador for a UN body called IIMSAM (Intergovernmental Institution for the Use of Micro-Algae Spirulina Against Malnutrition) for India and South Asia.



2012

Nina Brown is currently the editor and founder at InTandem Publications and Tandem Festival. She was previously manager at Cultivate Oxford Farming Coop, and associate producer at Jewson Film.

Liang (Steven) Chen: “In 2015, Steven founded Urbem Media in Shanghai, an AI-driven mobile platform that connects quality restaurants and middle-class diners using big data and machine

learning technologies. The company’s flagship product, Urbem TasteCard, is now the number one premier dining club on mobile (and WeChat) in China. Urbem received funding from SOSVenture (the leading VC from Silicon Valley), Triumph Capital (the largest VC in Australia) and Shanghai Municipal Government. The company has been growing rapidly since the establishment. For media contact, please email info@urbem.cn.”





Obituaries

We record with regret the following deaths of fellows and alumni, listed in order of matriculation. Use of an asterisk (*) indicates that an obituary follows; we are most grateful to those who have supplied this material.

Principal, 1988-1995

Christopher Zeeman*

Tutor in Medicine, 1956-1985

Miles Vaughan Williams*

Honorary fellow, 1998-2016

David Daniell

1927

William Waddington-Brooks

1933

Denis Britton*

1939

John Reynolds

1940

Peter Coldwell

1941

Lyall Pierson

1943

William Ayles
Owain Davies
Colin Exley
Tony Garner
Hamish Pender

1944

Gordon Martin

1945

John Stallard
Roland Todd

1946

Miles Malleson
Felix Pirani

1947

Douglas Wilson

1948

Tim Barclay
Alan Forbes
William Gaskill*
John Smithard

1949

Brian Balderstone

1950

John Brock

1951

Philip Bagley

1954

Stuart Bamforth

1955

David Blomfield
Neil Sorton

1956

John Cole

1957

Tony Moreton

1958

Hugh Bingham

1960

Heron Woolls

1966

Peter Mackie

1968

John Pender



1972

Richard Adkins

1974

Dawson Harris

1975

Dave Edwards

1976

Simon Lawson

1978

Suzanne Leighton

1979

Tim Bloomfield

1983

Andrew Lyall

1994

Felix Kullchen

2001

Matthew Bardsley

2013

Yuto Tabata

And Simpkin, the college cat
(2000-2016)*



Sir Christopher Zeeman FRS, Principal of Hertford 1988-1995

4 February 1925 – 13 February 2016

Sir Christopher Zeeman, the mathematician, who has died aged 91, had a unique combination of mathematical and administrative abilities, allied to an overwhelming personal charm.

Zeeman’s career had five distinct phases: as a brilliant topologist at Cambridge (1947-1964); as the Founding Professor of Mathematics at Warwick who created the Warwick Mathematics Institute (1964-1988); as the propagator of catastrophe theory and its applications (1970s); as the public face of mathematics in the 1970s and 1980s; and as the Principal of Hertford College, Oxford, from 1988 to 1995.

After war service as an RAF navigator, Zeeman was at Cambridge from 1947 until 1964, as an undergraduate, then graduate student, research fellow and lecturer. Initially, he was a conventional mathematician, working in topology, the geometry of curved spaces in many dimensions. In his PhD thesis, he developed “dihomology”, an ingenious algebraic technique for counting the local singularities of a topological space by the failure of the manifold Poincaré duality. Technically, this was a failed proof of the three-dimensional Poincaré conjecture for deciding if a space is a three-dimensional sphere. This was only proved by Perelman in 2003. But in the 1980s, Zeeman’s dihomology led to the powerful method of “intersection homology” in pure mathematics of spaces with singularities. It may yet find an application in “big data” science, which is currently so fashionable, as a method for the recognition of the topological features of large data sets.

In the 1960s, Zeeman was a pioneer of “piecewise linear topology”, the study of geometric spaces made from broken matchsticks. He developed the “engulfing” technique for manifolds, using it to prove the five-dimensional Poincaré conjecture and the “unknotting” of three-dimensional spheres in five dimensions. In an 1983 BBC Radio 3 talk, he memorably described how he had found the solution to the unknotting problem while sitting on the lavatory.

In 1964, Zeeman moved from Cambridge to the new Warwick University, where he set aside personal research for five years to create the internationally-renowned Mathematics Institute from scratch. It is now housed in the “Zeeman Building”. Apart from the usual undergraduate and graduate education, the institute is a major international mathematics conference centre.

In the 1970s, Zeeman worked on dynamics and catastrophe theory,



the latter a precursor of chaos theory developed by the French mathematician René Thom, in which continuous inputs lead to discontinuous outputs. It has been said that Zeeman played St Paul to Thom's Messiah. Even if he sometimes oversold them, Zeeman's applications of catastrophe theory to the social sciences (prison riots, marital strife, economics, animal behaviour, and so on) caught the public imagination.

Zeeman was a pioneer of communicating the excitement of mathematics to the general public. In 1978, he delivered the Royal Institution Christmas Lectures on "Mathematics into Pictures", which made him into the first mathematical television star. He was an inspired teacher, not least of his children: his daughter Mary-Lou is also a mathematician, and they published three joint papers on the geometry of the Lotka-Volterra predator-prey equations. Apart from his serious mathematical papers, Zeeman was not above writing a paper on "The mathematics of dressmaking", published in *Costume* magazine.

During his time at Oxford, Zeeman helped establish the Regulatory Policy Institute, concerned with the public impact of economic policy.

Zeeman had many friends at home and abroad, and was a frequent visiting professor at mathematical institutes around the world. Even before Warwick, and before there were mathematical departments at Cambridge, he brought many foreign mathematicians to the UK, at a time when British mathematics was still somewhat provincial.

Zeeman served on the Mathematics Committee of the Science and Engineering Research Council from 1982 until 1985; was president of the London Mathematical Society from 1986 to 1988 (having won its Senior Whitehead Prize in 1982); and was Gresham Professor of Geometry at Gresham College, London, from 1988 to 1994. The Institute for

Mathematics and its Applications and the London Mathematical Society now have a joint Zeeman Medal in his honour.

He was elected a fellow of the Royal Society in 1975, winning its Michael Faraday Prize in 1988 for his exemplary expertise in communicating scientific ideas in lay terms. He was knighted in 1991 "for mathematical excellence and service to British mathematics and mathematics education".

Zeeman was married twice, first to the medievalist Elizabeth Salter, with whom he had a daughter, and secondly to Rosemary Gledhill, with whom he had two daughters and three sons.

The Telegraph, 15 March 2016

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Robin Devenish, Emeritus Professor of Physics and a tutorial fellow and senior tutor over the period of Sir Christopher's Principalship, writes (with help from Brian Steer, Keith McLauchlan and others):

Christopher Zeeman was one of the leading mathematicians of his generation and was also very much concerned with improving the quality of mathematical education. In 1964, he moved from Cambridge, where he had done distinguished work on geometric topology, to the new University of Warwick as a foundational Professor. It was an inspired choice. In a few years, by persuasion and by concentrating on

“He was very fond of the theorem known as the dunce's hat, which is illustrated in his portrait in Hertford College dining hall”



three or four subject areas, he built up an excellent department; the story—never denied by Christopher himself—goes that when inviting several key figures to join him in the new venture, and being turned down by all of them, he wrote to each saying: “That’s a pity, the others have all accepted.” The department rapidly achieved the world class status which it maintains today—the most recent Fields Medal (2014) having been awarded to one of its members. From its beginning, Maths at Warwick emphasized discussion and personal contact, with a large tea room a crucial part of the department—as in Oxford and Bonn today.

After going to Warwick, Zeeman himself made important contributions to the new topics of dynamical systems and catastrophe theory—one example of which relates financial devaluation and depression. He was very fond of the theorem known as the dunce’s hat, which is illustrated in his portrait in Hertford College dining hall. His lectures at Gresham College and the 1978 Royal Institution Christmas Lectures were inspirational in explaining the scope and importance of mathematics to the public at large, and children in particular.

Christopher came to Oxford as Principal of Hertford in 1988, following Sir Geoffrey Warnock’s tenure (1971–1988). Academically, Hertford was near the top of the Norrington Table, reaping the benefit of an adventurous admissions policy targeting state schools. Through the careful management of its finances by Roger van Noorden, the college was no longer amongst the poorest in Oxford. It was a successful period for the college and the new Principal enthusiastically encouraged a series of further developments and events, ranging from Roger Pensom’s careful direction of French medieval plays in costume on OB1 lawn (to the bafflement of tourists peering through the front gate from Catte Street) to Neil Tanner’s successful bid

to the then Sports and Arts Fund, which greatly improved the college’s boat club facilities.

Two initiatives at Hertford that occurred under the Zeeman Principalship were particularly notable. The first was territorial. As readers know well, Hertford occupies a rather small split site joined by the famous “Bridge of Sighs” across New College Lane, with no room for expansion and insufficient space to house all undergraduates—a deterrent for future applicants as it was expensive to rent in the city. In 1993, the car park behind the Head of the River pub by Folly Bridge, close to houses already owned by the college, came on the market. A successful bid was made and development followed, costing around £2 million. Two student blocks, with a joint kitchen and dining room, were opened by Sir Geoffrey Warnock in October 1995. This gave rise to a keen internal competition on which kitchen offered the best meals, and also allowed us to achieve our aim of housing all our undergraduates, along with a sizeable number of graduates and visiting students.

The second initiative was the election of female fellows. Hertford had followed up its pioneering acceptance of female students in 1974 with the appointment of Julia Briggs as tutorial fellow in English in 1978. But when Christopher arrived in 1989, she was still the only female member of Governing Body. During his six-year tenure, Drs Margaret Dallman (Medicine), Anne Holmes (Modern Languages), Stephanie West (Classics), Charlotte Brewer (English), Keiko Tanaka (Japanese), and Karen Day (Biology) were all elected to senior research fellowships or tutorial fellowships.

Sir Christopher chaired his last Governing Body meeting in June 1995 and was thanked for his vigorous leadership of the college by Richard Malpas, the senior fellow.



Miles Vaughan Williams FRS, Tutor in Medicine, 1956-1985

8 August 1918 –
27 August 2016



It is a measure of Miles that one is distressed by his death despite his advanced age. The college, and science and medicine, owe him a great debt. I have written in some detail previously in the college magazine (no. 88, 2008) about his career, first as a Greats man at Wadham, then as an ambulance driver, followed by turning to medicine and finally to pharmacology, a remarkable career by any standards and one that would be almost impossible to follow today. Here I shall retell more personal memories.

He was the first full science fellow in Hertford but, shortly after his appointment, he persuaded the Governing Body that the college needed a “real scientist”, which is how Neil Tanner came to be recruited. So Miles had a hand in all that Neil accomplished. At the time of Miles’ election, he was only the ninth fellow. My earliest memory of him was the celebratory party he gave on the birth of

his son. At the time the SCR cellars had a remarkable collection of port, and on that evening Miles caused all the major vintages of the early 20th century to be served – 1908, 1927 and 1947. All the port experts of Oxford were invited and they sipped each with awe, several refusing to taste anything after the 1908. To my uneducated palate it just tasted musty.

Entirely off his own bat, Miles decided to improve the kitchens and the general fabric of the college. He designed, and oversaw, the redevelopment of OB1, OB2 and the Old Library. His pièce de résistance, however, was his design for the Holywell Quadrangle, for which a professional architect won a prize by following Miles’ design, especially his determination to preserve a view of New College. But, interestingly, the Governing Body were almost unaware of the extreme effort he made and how significant his input was. Miles was always a very modest man.

This is but one example of how little members of the Governing Body know about each other or each other’s achievements. It was never “decent” to talk about such things as one’s own research. Thus, we were unaware that, whilst he was transforming the well-being of the students, he was also acquiring a major international scientific reputation. It was Miles who realized that after a major heart infarction people died when

☞ He designed, and oversaw, the redevelopment of OB1, OB2 and the Old Library ☞



they experienced an atrial fibrillation. He researched this very carefully, largely using apparatus that he built himself, and in the days before beta blockers were introduced, established an index that prescribed which drugs to administer given a specific set of symptoms. This index was taught worldwide in pharmacology schools. His work was recognized internationally, not least by the awarding of an honorary doctorate from the Sorbonne. The income which accrued from his consultancies created the Vaughan-Williams fund in college.

But my greatest memories are of his approachability and of his slightly sardonic sense of humour. Smiles readily appeared on his face and he was the best of company. To my mind, he was one of the most significant fellows the college has ever had. No one put more into it than he did and no one did more to increase its reputation through his own research. The pity was that we did not know this until after his retirement. I

would be remiss not to mention the contribution of his wife, Marie. She was completely supportive, and for some years she was effectively the First Lady of the college, and is much loved by all of us from that era.

Keith McLauchlan, Emeritus Professor of Chemistry

“ His work was recognized internationally, not least by the awarding of an honorary doctorate from the Sorbonne ”



Denis George Britton O.B.E. 1915–2015

Denis George Britton died in his 100th year in 2014. Born in Hastings in 1915, he was the youngest of three brothers and was educated at Taunton's School Southampton, where his father was a teacher and he was captain of school. Denis attended Hertford College on a full State Scholarship, matriculating in September 1933. In his first year, he was placed in a room just a few steps from the JCR and was a member of the football team that won promotion to the first division in the 1934/35 season. An excellent swimmer, coached by his father, he was south of England breaststroke champion. At Oxford, Denis was a member of the Oxford water polo team and was awarded a Half Blue. In the mid-30s, "home" games were played in a tiny swimming pool at Merton Street—only 21 yards long and eight wide, whilst the Varsity match took place at the "Empire Pool" at Wembley—30 yards long and twelve yards wide. He played in both the 1935 (winning 3-1) and 1936 (losing 6-4 finals) matches. Later, in West Africa, he

put his swimming and life-saving skills to good use, rescuing a number of swimmers in trouble in the Atlantic surf.

On coming down from Oxford, Denis joined the colonial service as an auditor and was posted to the Gold Coast (Ghana). At the end of World War II, he was appointed Director of Audit on the island of St Helena, followed by British Guiana (Guyana), where he was awarded an MBE for his services. After a short spell in London in the early 50s, he served for seven pleasant years as Director of Audit in Mauritius, followed by the prestigious posting of Hong Kong. On retirement, he worked as a consultant with the Overseas Development Agency for five years, assisting the audit departments of Antigua, St Vincent and the Grenadines, Dominica and St Lucia and Barbados. During the next 39 years, he shared his time between Barbados, the UK and Cyprus, writing his autobiography and pursuing family history.

Wherever he was in the world, Denis joined the local tennis club, continuing to play until he was over 90. He loved dancing and was known for dancing into the small hours, leaving a string of exhausted partners. He is survived by a son and daughter.

Sara Nielsen

The Oxford swimming Blues team. Denis is in the front row, second from the left





William Gaskill

1930-2016

William Gaskill, the stage director who has died aged 85, was one of the most distinguished, controversial and gifted exponents of the much-vaunted “right to fail” ethos in Britain’s post-war subsidised theatre.

A dedicated Brechtian ever since the visit of the Berliner Ensemble to London in 1956, he brought his perception of the German playwright-director’s style of staging not only to productions of Brecht in English, but also to Shakespeare, the Restoration dramatists and new Royal Court writers.

Among this group was Edward Bond, one of the “second wave” of Sloane Square playwrights to erupt under the auspices of the English Stage Company, which, under George Devine, had got off to a controversial start with John Osborne’s *Look Back in Anger* in 1956; and though Bond never had a popular success to compare to Osborne’s epoch-making drama, his plays, particularly *Saved* (1965) and *Early Morning* (1968), affronted the stage censor so forcibly that the publicity attending their productions (in spite of their being banned) hastened the end of theatre censorship in 1968.

Gaskill showed his integrity and courage more than once as the artistic director of the Royal Court Theatre in the 1960s, when not only Bond’s plays but also one of Osborne’s—*A Patriot for Me* (1965)—was acted against the censor’s wishes in so-called club conditions, with playgoers paying a modest fee to join the English Stage Company on the grounds that the Lord Chamberlain had usually turned a blind eye to productions of unlicensed plays for club members.

What mainly motivated Gaskill, however, was not such matters as the stoning of a baby in a pram in *Saved*, the fantastic treatment of Queen Victoria’s supposed

lesbian relationship with Florence Nightingale in *Early Morning*, or the idea of a “drag” ball in *A Patriot for Me*, but the development of a new style of acting for the Royal Court writers and of staging classical plays in the Brechtian style.

At the time, this was commonly supposed to be based on the induction of an “alienation effect”, which was designed to prevent spectators from becoming emotionally engaged by the stage action, and to encourage them to remain critical of it throughout the performance. Gaskill’s achievement was actually less daunting; he seized hold of Brecht’s emphasis on clarity of narrative, simplicity of staging, realistic tone and scantiness of scenic effect, while leaving as many lights on as possible.

The result was productions which established—at least with connoisseurs—Gaskill’s reputation as the leading Brechtian in Britain. These included productions of Brecht’s *Caucasian Chalk Circle* and Shakespeare’s *Cymbeline* for Peter Hall’s Royal Shakespeare Company, and of Farquhar’s *The Recruiting Officer*, Brecht’s *Mother Courage* and John Arden’s Armstrong’s *Last Goodnight* for Laurence Olivier’s National Theatre.

Although in the view of some, he exercised the right to fail with shameless indifference to the box office, his revivals of Restoration comedy—which flourished without the “high-camp” appurtenances of fans, lisps, canes or huge wigs—were among the finest of his time.

Disdainful of the West End “commercial” theatre system, yet aware of the Royal Court’s need to transfer shows to survive, Gaskill tried to establish a permanent company with a repertoire of new and old plays in Sloane Square. But the venture in his first year as director proved financially disastrous and he had to revert to short runs with ad hoc companies.

Weary of the “shallowness and triviality” of first-night reviews on which the Royal Court counted to bolster audiences,



William Gaskill in 1980. Photograph: Kenneth Saunders. Reproduced with permission from the *Guardian*

Gaskill sought in 1967 to exclude critics from several national papers from openings, but was overruled by his board. In 1969, when a new play, *Life Price*, was playing, despite favourable notices, to nearly empty houses, he filled them for the last two weeks of the run by offering free seats, though his board forbade him to repeat the gesture.

The son of a grammar schoolteacher, William Gaskill (known as “Bill”) was born at Shipley, Yorkshire, on 24 June 1930, and educated at Salt High School, Shipley, where he began staging ballets unofficially and ran an amateur theatre with Tony Richardson, whose father was a would-be Tory councillor.

Trying to raise money to put on a show, the two boys were required to canvass votes on behalf of Richardson’s father. When young Gaskill protested: “But I’m a socialist!”, his friend replied: “Do you want

to do this production or not? It’s the only way to get the money.”

Thus, the Shipley Young Theatre got its show. The Civic Playhouse, Bradford, another amateur theatre, was also an early influence on the young would-be directors.

After Gaskill won a scholarship to follow Richardson to Oxford, where, at Hertford College, he deliberately discarded his West Riding accent (“while Tony Richardson shrewdly kept his”) and they each produced shows in the late 1940s. Then, Gaskill’s father encouraged him to spend six months in Paris studying mime, ballet and acting. Back in Britain after jobs as a male nurse, a baker and factory worker, he entered weekly rep.

His first production was of St John Ervine’s *The First Mrs Fraser* at Redcar, Yorkshire, in 1954, and after a stint with Joan Littlewood’s Theatre Workshop and



at the “Q” Theatre, London, he went to the Royal Court, where he worked as assistant to Devine on a number of plays from 1957 to 1959.

With his friend and fellow-director from the Royal Court, John Dexter, he helped Laurence Olivier in 1963 to start the National Theatre at the Old Vic.

When he returned to the Royal Court in 1965, during Devine’s final illness, Olivier sent a telegram: “The Lord gave and the Lord has taken away”. Gaskill ran the Royal Court alone until 1969, when he was joined by Lindsay Anderson and Anthony Page to form a triumvirate until 1973.

Among his other productions there were Charles Wood’s *Fill the Stage With Happy Hours* (1967), Bond’s *Early Morning* (1968) and *Narrow Road to the Deep North* (1969), and Brecht’s *Man is Man* (1971).

The following year, Gaskill, by then one of Britain’s most eminent stage directors, left London to start up the Joint Stock

Theatre Group. Among his co-productions were David Hare’s *Fanshen* (1975), Barry Keeffe’s *A Mad World My Masters* (1977), and Howard Brenton’s *Epsom Downs* (Round House, 1977). He also directed *The Ragged Trousered Philanthropists* (1978) and *An Optimistic Thrust* (1980).

Meanwhile, in 1979, he staged for the National Theatre, Middleton and Rowley’s *A Fair Quarrel* (Olivier) and, at the Lyric, Hammersmith, Goldsmith’s *She Stoops to Conquer* (1982) and Congreve’s *The Way of the World* (1984).

His later career also found him directing for the Edinburgh International Festival and on and off Broadway.

He published a memoir, *A Sense of Direction: Life at the Royal Court* (1988), and a collection of essays, *Words into Action* (2010).

He is survived by his sister, Ruth.

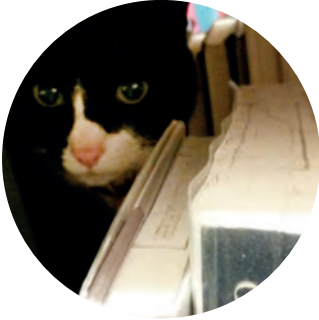
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“Gaskill showed his integrity and courage more than once as the artistic director of the Royal Court Theatre in the 1960s, when not only Bond’s plays but also one of Osborne’s—*A Patriot For Me* (1965)—was acted against the censor’s wishes”



Simpkin

2000-2016



It is with sadness that we announce the death of our college cat, Simpkin, in July 2016. He was sixteen, and the third Hertford College cat to bear the name.

Simpkin joined Hertford College in 2000, and was thereafter a familiar face around Oxford. He occasionally took trips elsewhere, most notably to Winchester, after climbing into the back of a milk delivery van. During Simpkin's lifetime, he served under three principals, had more than twenty attendant porters to look after him, and was able to call on the services of 3,000 students and staff to provide the rubs which undoubtedly contributed a great deal to his very long and perfectly happy life. He was a truly terrible mouser, a sometime successful bird catcher, and a loyal and faithful companion to many students, fellows and staff. He never married.

Simpkin will be greatly missed, but we fully expect that he will not be the last of his name.

The following is reproduced from the "College News" section of Hertford College Magazine no. 84 (2002), p. 13 (incidentally revealing that, over his lifetime, Simpkin's name was hypercorrected to that of his namesake):

[The new] Simpkins arrived as an eight-week-old kitten in July 2000, in the livery

of his predecessors (smart black and white): nothing else would do, although the original Simpkin (*sic*) of *The Tailor of Gloucester* was of course a tabby. He soon made himself at home and, by September, was practising the art of jumping on to High Table during dinner and sliding its whole length in a daring raid on the presiding fellow's plate. Well, it could have been worse: the Governing Body minutes of 16 February 2000 contain the following note for posterity: "The Bursar reported that the search for a new college cat was continuing. It was suggested that the college might consider adopting another animal, such as an elephant. The Dean, however, wished to make clear that he was not prepared to feed an elephant." It is a pleasure to record that the costs of feeding the new Simpkins, and his medical bills, are being met by the Hertford Society, so his health and comfort are assured. He is nothing if not adventurous, as his illicit excursion to Winchester (undertaken entirely on his own initiative) demonstrated.

☺ During Simpkin's lifetime, he served under three principals and had more than twenty attendant porters to look after him ☺





