A history of innovation

Lightbulb moments at Magdalen

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Ten books that changed the world
The impact of ten science and technology first editions in our collection

Teach by example
Teachers Richard Ogden and Alex Ryzak discuss the importance of outreach on a trip back to College

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This year Magdalen celebrates its 560th anniversary. And ever since Bishop William Waynflete founded our College on 12th June 1458 Magdalen has become a beacon for some of the brightest people and the best ideas.

The influence and impact of our community spans generations and disciplines. It has helped shape global politics from the Houses of Parliament to the US Senate and Australia’s Parliament House, contributed to the development and upholding of law for centuries, and supported economies around the world, one new business at a time. And few academic institutions have had a deeper impact on the arts than ours.

In this issue of Floreat, however, we focus on how Magdalen has changed, and is changing, the world of science and technology.

In A history of innovation on page 14 we look back at some of the innovators of our past, including Magdalen Fellow Erwin Schrödinger who has recently had a building named in his honour at the College-owned Oxford Science Park. We also look forward to the innovators of tomorrow such as Magdalen Fellow Professor Constantin Coussios who is revolutionising organ transplantation.

Even the brightest people need inspiration so on page 18 Librarian Daryl Green discusses the ten science and technology first editions in our library that have changed the world, from Aristotle’s Physica to Schrödinger’s What is Life?

If we are to maintain our innovative community we need to ensure we appeal to promising students who may not have considered applying to Magdalen. In order to achieve this, we are increasing our outreach work in a significant way. On page 22 we meet state school teachers and Magdalen alumni, Richard Ogden and Alex Ryzak, on an outreach visit back to Magdalen with their pupils. They share their memories of living and studying here, and talk about the importance of making Oxford more open to all.

Richard and Alex’s visit was just one of 70 visits from schools and colleges over the last 12 months, but we know there is more we can do. That is why the College is currently developing a major new strategy to encourage and support students who may otherwise miss out on a chance to benefit from all that we offer. We will need the continuing support of the members of the College to take this strategy forward.

Our 560th anniversary is a chance to give thanks to William Waynflete for having the foresight to found our College, but also to recognise his generosity. He believed that no academically talented student should ever be deprived of an education for lack of financial means - a sentiment so many in the Magdalen community believe in. I would like to take this opportunity to thank all of you who have made a gift this year. Your support really does make a difference.

As we celebrate 560 years of Magdalen College, I hope that you will take pride in all that we have achieved together and join me in looking forward to our achievements to come.

Professor Sir David Clary FRS
A heartfelt thank you

Dear Dr Ed Dodson
[Our new Outreach Officer],

I am writing to you to say a huge thank you for welcoming us and introducing us to Magdalen College. We really enjoyed the trip and the visit and we had a great experience thanks to you.

One thing I enjoyed learning about was the lecture about magnetism because it was very different to my every day school lessons. I found it quite interesting and I learnt a lot of new facts from it.

I found Magdalen College very beautiful and it was very different to how I thought it would be before I visited it. It looked stunning and gave me more positive opinions on going to university. Also, I discovered that a lot of colleges look very different and you have a variation of designs and types of buildings.

My visit to Oxford has really helped me understand what going to university is actually like. Oxford University is a place full of kind warm-hearted people.

Thank you so much for helping me shape my future and I wish you the very best in yours. Thank you.

Kind regards

Kadra, a Year 9 pupil at
King Solomon Academy

International Women’s Day

I’ve met many remarkable, talented, accomplished women at Magdalen, but would like to salute just two of them today:

Dr Christine Ferdinand [Emeritus Fellow, formerly Magdalen’s Fellow Librarian], a powerful inspiration and advocate for women everywhere, and an absolute champion in my eyes.

I would also like to honour Dr Jo Myers Thompson (1993), biological anthropologist, conservationist, primatologist - and my best and most beloved friend since we met at orientation in October of 1993.

These two women shine in my eyes for their compassion, intelligence, grace, and the generosity of spirit to empower and mentor others. With wholehearted gratitude and admiration I honour Christine and Jo, both of whom make this world a better place.

Deanna McHugh (1993)

You can see the new portrait of Dr Christine Ferdinand on page 6

Floreat Magdalen survey

Thank you to everyone who took part in our survey. We listened to what you said, and we’ve made a few tweaks here and there to improve things.

We were really pleased to see that most people rated Floreat Magdalen as ‘good’, but with your continued feedback we can make it ‘excellent’.

Let us know what you think of this issue.

Follow the herd

We know our deer are popular, but we were surprised when this Facebook post reached almost 90,000 people worldwide.

Morning at Magdalen. The herd is waking up.
When Elizabeth Nyikos (2009) isn’t working towards her DPhil in Music at Magdalen she is taking photographs. And it’s clear from the remarkable results that her eye is as good as her ear.

Elizabeth’s talent hasn’t gone unnoticed. She was awarded top prize in the University of Oxford graduate photography competition and first prize in the College’s recent Flora and Fauna art competition.

I ask her what went into creating this beautiful prize-winning shot of our herd in the snow.

“The deer usually gather at the far end of the deer park in winter so last December, when it snowed two days before the herd was due to be moved from the Water Meadow, I knew it was my one chance to take close shots of the deer in snow.

“I arrived at Magdalen while the snow was still falling and just as the deer were being fed, then spent another hour crouched in the snow by the fence waiting to capture the perfect shot of the head stag’s snowy antlers.”

Photo taken using a Nikon D7000, Nikkor 70-200 f/2.8 at 200mm, f/4, 1/400, ISO 400.
Fellows’ news
Introducing new faces at Magdalen

Keeping Fellows in the picture

Magdalen’s former Fellow Librarian Dr Christine Ferdinand lit up our libraries for nearly 25 years, and now, thanks to a new portrait, she’ll be lighting up the Longwall Library for many years to come.

In her time as Fellow Librarian Christine oversaw the biggest Library redevelopment project at Magdalen since the Buckler building was converted from a school into Magdalen’s Library in 1932, running the Library during the process from a temporary tent-like structure in St Swithun’s Quad.

Daryl Green, the current Librarian, said, “Christine’s portrait belongs in the magnificent refurbished library that she oversaw for the last decade of her time in College. For the first half of her career here, she inhabited a very different library space, old and worn and in need of improvement.

“As much as the new Longwall Library will stand as a testament for her enthusiasm in driving forward the needs of a 21st century college, her portrait will give future College members a personal glimpse of this remarkable woman who had the enthusiasm and stamina to see this library come to life.”

Christine retired as Fellow Librarian in 2016 and become Emeritus Fellow at Magdalen. She is a Fellow of the Society of Antiquaries and remains an active member of the College community.

The painting is part of the College’s permanent collection and hangs on the ground floor of the Buckler building. Christine’s portrait is the third in a series which recognise the remarkable contribution of female Fellows at Magdalen. The other portraits feature Professor Elizabeth Fricker, former Fellow in Philosophy and Professor Dame Frances Kirwan, former Fellow in Mathematics.

New Fellows

We welcomed Professor Paul Billingham as Tutorial Fellow in Politics at Magdalen in April. He is an Associate Professor of Political Theory at the Department of Politics & International Relations.

His most current work considers how the liberal state ought to respond to citizens - and especially religious groups - whose beliefs and practices do not seem to cohere with liberal values. He is also writing on ‘online public shaming’: the use of the internet, particularly social media, to criticise (perceived or actual) moral failures and misdemeanours.

We also welcomed Professor Simon Gilson as Professorial Fellow in Medieval and Modern Languages in January. He is Agnelli-Serena Professor of Italian Studies.

His research is focused on Dante, the reception of Dante, and Renaissance Italian literary, cultural and intellectual history. He has been involved in several collaborative funded research projects in the fields of medieval and Renaissance studies, and is currently leading an AHRC-funded collaborative project ‘Petrarch Commentary and Exegesis in Renaissance Italy, c.1450-c.1650’.

Professor Avi Lifschitz joined us in October last year as Tutorial Fellow in History. He is Associate Professor of European History at the Faculty of History.

The intellectual and cultural history of Europe in the long eighteenth century (c. 1680-1815) is his main area of research. He is particularly interested in the links between Enlightenment anthropology, theology, and political theory. Other significant aspects of his work include translation and cross-cultural transfer as well as the history of royal academies and exiled intellectuals in the eighteenth century.
In December 2015 Oxford Dictionaries shocked the English-speaking world when it announced that its word of the year was not a word at all, but an emoji: "RIP Language" ran the gloomy headline in the Telegraph. An article published in the same newspaper in April 2018 reported that a study carried out by Google had concluded that 'emoji are ruining the English language'. Is the English language really at risk of being replaced by a collection of grinning faces? Will Magdalen English students of the future find themselves confronted by the following openings of famous novels instead of their originals?

Since they were first introduced to Japanese pagers in the 1990s, the use of emoji has expanded dramatically. Their success is a consequence of the digital medium in which they are used. Electronic communication is a form of writing that resembles a casual conversation more than formal prose, often taking place in real time with a known recipient, but lacking the extra-linguistic cues such as facial expressions, tone of voice and hand gestures that help to convey meaning in face-to-face interactions.

New methods of encoding such features of communication emerged to enable senders to include non-linguistic interjections - "ugh" - and physical responses: "facepalm". Emoticons first appeared in computer science bulletin boards in the early 1980s, where the combination of keyboard strokes : - ) was used to mark jokes, while : - ( indicated seriousness. Emoji have come to replace the comparative crudity of the emoticon, enabling the representation of a greater range of expressions with less ambiguity - does :-o indicate astonishment or boredom?

But where the use of emoji has grown out of a radical move to shake off the constraints of written language, the release of new emoji is subject to the approval of the Unicode Consortium. Such decisions are frequently contentious, given the lack of representation of certain ethnic groups, their cultures and religions; it is only recently that it has become possible to choose from a range of skin tones. Although the Emojipedia database sets out their official uses, there is no way of licensing the creativity with which users repurpose emoji, as is apparent from the surprising success of the aubergine emoji amongst sexting teenagers, prompting Instagram to ban it from its image searching facility.

But for emoji to become a fully-fledged language there would need to be a vastly greater number of characters. While there are currently more than 2,500 emoji, these include a disproportionately large number of facial expressions and hand gestures. Emoji are an efficient means of representing concrete items, like animals, foods, sports and leisure activities, but less effective at conveying abstract concepts like doubt, chaos and freedom. But most significantly, the system of emoji lacks the grammatical rules that are necessary for the formation of more complex constructions. This claim may appear to be undermined by the recent publication of Emoji Dick - a translation of the entirety of Herman Melville’s classic novel Moby Dick into emoji. But you don’t have to read for long before getting the sense that something has been lost in translation. In Emoji Dick the novel’s famous opening ‘Call me Ishmael’ is represented by a telephone, a man with a moustache, a boat, a whale, and an OK sign. But, while it may be a while before English students are reading A Tale of Two Cities and Pride and Prejudice in emoji, it is clear that, whether you love or hate them, they are here to stay.

Simon Horobin is a Fellow at Magdalen College and Professor of English Language and Literature. He is also Chair of the Library and Archive Committee.

* It was the best of times it was the worst of times. It is a truth universally acknowledged, that a single man in possession of a good fortune, must be in want of a wife.
Online

If you’re missing Magdalen, there are plenty of ways to stay in touch online

Now and then

For all of you who have toiled away in the Library wishing you were in the pub, before 1845, you would have been; the Greyhound Pub to be exact. It had been in that spot since the 1500s.

We have produced a series of images called Now and Then showing parts of College today and how it would have looked in the past. You can see them at magd.ox.ac.uk/alumni-friends/news

Our charter

You can now get up close and personal with the Magdalen College charter online. The document, dated 12th June 1458, is available to view in all its glory at digital.bodleian.ox.ac.uk, complete with the red wax seal of William Waynflete, Bishop of Winchester, Lord Chancellor of England and founder of the College. The charter forms part of the Chartae Regiae and Chartae Concessae series within the College’s extensive medieval muniments.

It is our 560th anniversary this year

Missing Magdalen?

Magdalen has recently produced a number of videos to promote different aspects of College life. If you’re missing Magdalen and are interested in May Morning, Summer Eights or studying music at College, we think you may enjoy them.

You can find them at magd.ox.ac.uk/alumni-friends/news

>5,800

The number of followers we have on Twitter
AI will save us
Professor Daniel Kroening discusses the future of autonomous software and how Artificial Intelligence could be our saviour against bad code

Are we sleepwalking into an AI-controlled dystopian nightmare? Once the preserve of science fiction paperbacks, the idea that artificial intelligence poses a true existential threat has grown in popularity.

Tech royalty like Elon Musk or Stephen Hawking warn us of impending doom whilst new think tanks seem to spring up on a daily basis, looking to try and ‘steer’ AI to a more benevolent form.

The fact is, we’re still a long way from AI that poses the human race any kind of threat, and the hand-wringing over its morality and current direction perhaps misses a larger, more important point.

I would argue that the most dangerous area in modern technology is not software that’s too clever, but rather software that isn’t clever enough.

To explain what I mean it’s worth looking back to April 2014. Back then the world learned in horror that a major security flaw at the very centre of the internet had exposed the personal details, credit cards, and passwords of millions. It was called, somewhat dramatically, the ‘heartbleed bug’.

Speaking at the time, the security expert and chief technology officer of Co3 Systems, Bruce Schneier, said the leak was ‘catastrophic ... on the scale of one to 10, this is an 11’. The world took a collective gasp, changed a couple of passwords, then went back to business as usual.

You would assume this then became the global tech community’s main priority? Wrong. Last week a report revealed that close to 200,000 websites and servers remain vulnerable. That’s three years after it was discovered.

It is another rung on the ladder towards self-conscious code

The fact is that software is becoming increasingly complex, interdependent and vulnerable. Hacks like heartbleed are becoming regular occurrences, and this is down to software that has become too difficult for humans to properly test and manage. When an application has millions upon millions of lines of code it’s unrealistic to think that humans can guarantee its safety and security. Indeed, as we adopt new tech like self-driving cars and connected smart homes we could well be putting our faith, and potentially our lives in the hands of shaky software. So it’s important we get it right.

The good news is that AI, rather than threatening our very existence, has the potential to insure us against this risk, though perhaps not as you might imagine.

I’m talking about AI that talks not to humans but directly to computer programs, creating software that codes, edits and tests itself. This will ensure better software that is more secure and impervious to attack. AI could well be our saviour against bad code.

But we have managed to write computer programs that can understand what other programs are trying to do and then correct them when they go wrong. This is a huge breakthrough.

It sounds terrifying but we have, in essence, created computers that can write code by themselves, suggesting corrections to enormously complex programs that make them better, or more safe.

What’s more, this software is in fact an important step forward towards autonomous software production. Put another way, it is another rung on the ladder towards self-conscious code. But this is software which is correcting other software, which may one day save our lives. It’s fair to say this could be one of the most important problems currently being worked on by computer science.

Forty years ago we had ‘10 print ‘hello’, 20 goto 10’. Now we have software that can read 10 million lines of code from another program and improve it. We are making rapid progress and it’s important that we work quickly enough to help developers prevent the type of catastrophic errors that led to the heartbleed bug.

As the internet of things becomes reality we need to know the software behind our tech is safe and secure. AI may well be the only answer.

Daniel Kroening is a Fellow of Magdalen College and a Professor of Computer Science. He is also CEO of Diffblue, a world leader in AI that understands code.
The buck swaps here

If you haven’t been back to College for a while you may be surprised by the latest member of our herd.

In spring, a new white buck was introduced to strengthen the herd and to reintroduce the fallow’s characteristic spotty coat which has been lost from the College deer over the years.

There are four main variations in coat in fallow deer: common (tan with white spots at certain times of year), melanistic (black), menil (pale with white spots all year round), and white.

The new white deer is from Beel House, Little Chalfont. Originally built for the Duke of Buckingham in the 17th century, Beel House has been home to some interesting residents including Dirk Bogarde, Ozzy and Sharon Osbourne, and Robert Kilroy-Silk.

All the Beel House deer are white so the herd manager was able to swap one of our darker bucks for the white one.

The new white buck arrived at Magdalen in March and spent the first few weeks looking rather forlorn. Over time he has been accepted and can now be seen eating and sleeping together with the others.

But that could all change in October. The current head buck and our new arrival are of a similar size, which could mean fireworks during the rutting season.

You can follow news of the College herd on Facebook, Twitter and Instagram #DeerDiary #FollowtheHerd
Transforming Hall

The Hall at Magdalen underwent a metamorphosis earlier this year. Cocooned in white plastic scaffolding sheeting, it was slowly transformed by an army of electricians, conservators and decorators.

The project began almost two years ago when concerns were raised about the quality of the lighting, in particular the problem with glare: sitting in certain seats in Hall meant being under a spotlight. Following lengthy lighting trials, scaffolding went up in January and a full upgrade has now been completed. The new layout includes dedicated lighting for the portraits and certain architectural features such as the beautiful vaulted ceiling, and the fine carving and polychromatic details on the screen under the gallery which was erected in 1605 in honour of the visit of James I and Prince Henry.

With electricians on site, the College also took the opportunity to rewire the Hall, and install a new PA speaker system. Conservators also cleaned the stained glass, which is mainly 19th century, as well as the Henricien polychromatic panels at the dais. The 1900s Bodley & Garner ceiling has also been conserved, and specialist picture and frame conservators treated the paintings and their frames.

This is the first time the Hall has undergone such a thorough renewal and restoration in over 20 years. We hope that when you next visit us you'll enjoy seeing the Hall in all its newly revealed splendour.

Tales of the river bank

During the cold winter months a small group of hardy workers braved snow and ice to strengthen a section of the river bank on Addison's Walk.

The existing retaining wall had proved too thin for the job – hydrostatic pressure and toe erosion had weakened it beyond a simple repair – so major work was needed.

The existing retaining wall was removed and a large trench excavated behind it. The trench was then backfilled with concrete blocks and the facing of the wall replaced with limestone to closely match the original stone.

The College takes it riparian responsibility seriously and we work hard to ensure that Magdalen’s riverside footpath remains one of the most beautiful spots in Oxford.

Magdalen Menagerie

Did you know that Magdalen had an emu in the 1880s?
We’ve also had peacocks, swans, and our very own herd of pigs, not to mention evidence of mammoths and bears in the Grove. You can learn more at The Flora & Fauna of Magdalen College exhibition which runs until 10 October. Details at magd.ox.ac.uk
Events

Look back at another great year of alumni events

It has been wonderful to see so many of you making the most of all that lifelong Magdalen membership has to offer and attending our alumni events. These are a great way to catch up with what’s going on in College and meet other members of the Magdalen community, so do come and join us at an event near you soon.

Alumni Dinner
Last year’s Alumni Dinner with guest speaker Sir Sebastian Wood (1979), Ambassador to Germany, sold out within a few weeks, so if you would like to come to this year’s Alumni Dinner on Saturday 15th September, with guest speaker Baroness Harding of Winscombe (1985), Chair of NHS Improvement and former chief executive of the TalkTalk Group, book soon to ensure a place.

New York Reception
This reception in New York, kindly hosted by Ann & Steven Berzin (1972) at their home off Central Park, with guest speakers Pulitzer Prize-winning journalist Nick Kristof (1981) and editor-in-chief of Bloomberg News John Micklethwait (1981) discussing the Trump administration, had record numbers attending an event outside the UK and is testament to the strength of our Magdalen community in the US.

Gaudies
This year we held a Gaudy for our oldest cohort, those who had matriculated in 1957 or earlier, at which we recorded some of their memories for the archive (including 100-year-old Cecil Hourani who matriculated in 1936), followed by a Gaudy for our youngest cohort, 2007-8, who were celebrating their first Gaudy.

Fellows’ Retirements
Events were held in College for former students of Philosophy Fellow Lizzie Fricker and History Fellow Laurence Brockliss to mark their retirement after a combined 68 years teaching at Magdalen, and at the Law Society in London for Law Fellow Roger Smith after an impressive 43 years at Magdalen, with guest speaker Simon Davis (1978), President-elect of the Law Society. Modern Linguists look out for Toby Garfitt’s upcoming retirement dinner in College on Saturday 8th September.

Private tour
A highlight of our events calendar was a personal tour of the private quarters of historic Knole House in Kent, childhood home of Vita Sackville-West, by Lord Sackville (1976). This event will be repeated on Friday 5th October.

London Drinks Reception
The annual London Drinks Reception, generously hosted by Luke Johnson (1980), was held in the grandeur of Stationers’ Hall and attracted over 500 alumni with matriculation years ranging from 1951 to 2016.

Author talks
Talks were held in London by Man Booker prize-winning author Alan Hollinghurst (1972) on his latest novel *The Sparsholt Affair*; Bill Emmott (1975), former editor of the *Economist*, on his book, *The Fate of the West: The Battle to Save the World’s Most Successful Political Idea*; and Magdalen Fellow in Law Jeremias Prassl on his book *Humans as a Service: The Promise and Perils of Work in the Gig Economy*.

Women’s Network
Alumnae of all ages attended the 4th Magdalen Women’s Dinner at the University Women’s Club in London. The guest speaker was theatre director and Oxford University’s Visiting Professor of Opera, Katie Mitchell, OBE (1983).

Forthcoming events can be seen on p33. If you have any feedback, event suggestions, venue offers or speaker recommendations contact us at alumni.office@magd.ox.ac.uk

>1,200
The number of alumni who attended an event in the last 12 months
Donor impact

Highlights from a remarkable 12 months of fundraising at Magdalen College

£2.56m
The total amount raised thanks to our incredible donors.

18%
The percentage of alumni who made a gift, making our community one of the most generous in Oxford.

16%
The percentage of donors under 35

56%
The percentage of new donors under 35, making it our fastest growing group of donors

15%
The percentage of students who will get help from the Student Support Fund. The Student Support Fund provides support to those who would otherwise encounter financial hardship

“The Fund means so much to me. It has greatly improved my time at Magdalen. It has allowed me to focus on my studies without financial worry, while also enjoying all that is on offer!”

James, 3rd year Engineering student

33
The number of countries we received gifts from. Wherever our alumni settle in the world, so many remember Magdalen with a gift

1m
How much we’d like to thank everyone who supported Magdalen College

If you would like to find out more about supporting Magdalen College, please visit magd.ox.ac.uk/alumni-friends/supporting-magdalen
A history of innovation

Lightbulb moments at Magdalen
If the history of innovation was a book, there would be a member of the Magdalen community on every page.

Nobel Prize-winning Fellows Sir Charles Sherrington, who revealed the different functions of neurons, and Sir Robert Robinson, who discovered the structure of plant alkaloids, including morphine and strychnine, would feature prominently. Lord Florey (1921) would demand an entire chapter for the part he played in the story of penicillin, which has saved the lives of millions.

The development of tissue grafting, the basis for organ transplantation, by Sir Peter Medawar (1932), and research into how nerve cells communicate with one another by Sir John Eccles (1925), would be recognised. And, of course, space would be made for one of the greatest scientists of the twentieth century, Magdalen Fellow Erwin Schrödinger.

Professor Erwin Rudolf Josef Alexander Schrödinger was an Austrian theoretical physicist. He is perhaps best known for what he called his ‘ridiculous thought experiment’, popularly known as Schrödinger’s cat and published when he was a Fellow at Magdalen, which highlighted the limitations of the prevailing ‘Copenhagen interpretation’ of quantum mechanics. But it is his wave equation which has had the biggest impact on science.

The Schrödinger Equation is as important to quantum mechanics as Newton’s Laws of Motion are to classical mechanics. “After Einstein, Schrödinger is the most important scientist of the 20th century currently having an impact on the 21st century,” explains Professor Sir David Clary FRS, President of Magdalen College. “By using his equation we can reveal all the properties of atoms and molecules - the building blocks of everything around us.”

So important was Schrödinger’s Equation that in 1933 he was awarded a Nobel Prize, and the day he discovered he had won the award has gone down in Magdalen history.

“On 9 November 1933 Schrödinger arrived at Magdalen from Berlin to start his Fellowship,” explains Sir David. “He came to what is now my office, was admitted as a Fellow, and then the phone rang - he was told he’d won the Nobel Prize, there and then.” This story has a special meaning for Sir David as his own research on quantum chemistry is based on solving Schrödinger’s equation for chemical reactions.

Another of Schrödinger’s important contributions to science was his paper What is Life? In it he explores how the ideas of chemistry and physics can explain biology. It encouraged many physical scientists to work on biological problems, and had an influence on the work of Watson and Crick who discovered the structure of DNA. You can read more about What is Life? on page 21.

This year, a state-of-the-art office and laboratory building has been named in Schrödinger’s honour at the Oxford Science Park, which is owned and managed by Magdalen College. The Oxford Science Park is fast becoming one of the most influential science, technology and business environments in the UK, and it plays an important part in the College’s goal to create the next generation of innovators. Something we’re sure Schrödinger would approve of.
Transforming transplantation

Almost a quarter of people in need of a new liver die waiting for a transplant. At the same time, more than 5,000 livers are discarded every year, in part, because of the limitations of conventional cold preservation. A University of Oxford spin-out based at the Oxford Science Park is changing that thanks to a new machine which can store and transport livers by mimicking the functions of the human body.

The metra - the Greek word for ‘womb’ - has been developed by OrganOx which was co-founded by Magdalen’s Industrial Fellow in Engineering Science and Director of the Oxford Institute of Biomedical Engineering, Constantin Coussios, and Professor Peter Friend.

The metra keeps a liver viable by ensuring it is supplied with the correct amount of blood. It also monitors bile production and acidity levels which can help the transplant team see how healthy the organ is. Current regulations mean that the metra can only store livers for 24 hours – already double the 12 hours of cold storage – but Professor Coussios’ research suggests this could be raised to three days, possibly longer.

The metra is capable of achieving a 50% reduction in organ discard rate and a 50% increase in preservation time

A recent randomised clinical trial in six European hospitals demonstrated that the metra is capable of achieving a 50% reduction in organ discard rate and a 50% increase in preservation time whilst delivering much better transplantation outcomes for patients.

So far, 25 metras are in use around the world, but that number is set to rise. OrganOx also have plans to extend their technology to the preservation of other vital organs. Professor Coussios and his team are on the verge of changing organ transplantation forever.

Fighting flu

The World Health Organization estimates that flu kills between 250,000 and 500,000 people around the world every year. But thanks to another University of Oxford spin-out company based at Magdalen’s science park, we are one step closer to turning the tide on this pernicious disease.

The company, called Vaccitech, was co-founded by Adrian Hill (1978), Director of the Jenner Institute, Professor of Human Genetics, and Fellow by Special Election in Medicine at Magdalen. Vaccitech is developing a universal flu vaccine which will give protection from not just one strain of flu, but all of them.

Every other type of flu vaccine on the market works by triggering antibodies which recognise the surface proteins of the virus, but the problem with this approach is that these proteins change with each new strain, making the previous vaccine redundant. The new vaccine, however, will bypass surface proteins and go deep inside the virus where there are a small number of components which do not change between virus strains.

Early signs are good, and the vaccine is currently undergoing phase 2 trials - the first time a universal flu vaccine has progressed this far. These trials should be completed by the end of next year.

Vaccitech is also working to fight two viruses which are linked to cancer: the human papillomavirus and the hepatitis B virus.

“If the cellular immunity approach works, there are a lot of potential targets,” Professor Hill says. “There are infections like HIV, where you can make a therapeutic HIV vaccine.”

Recreating ruins

All six of the UNESCO World Heritage Sites in Syria have been damaged or destroyed by civil war. But Dr Alexy Karenowska, a Fellow by Special Election in Physics at Magdalen and the technical director of the Institute for Digital Archaeology (IDA), is helping to ‘virtually’ undo a little of the needless vandalism in a new project using a sculpture from the ancient city of Palmyra.

Dr Karenowska and her team are using high-intensity lasers to recreate the 2000-year-old Al-Lat statue which was smashed when the city’s museum was ransacked by Isis. Copies of the remaining fragments of the 3m-high statue were put back together, the missing pieces filled with blank stone, and an image of the original statue was projected over the top. The final results are said to be indistinguishable from the original.

The IDA has identified hundreds more objects damaged by Isis that are suitable for virtual reconstruction, and they are also in talks with the Greek government to project virtual images of the Elgin Marbles on to the frieze of the Parthenon in Athens.

(Left to right) The metra, the ancient city of Palmyra, and the big bang
Analysing antimatter

Neutrinos are the second most abundant particle in the universe after photons; trillions are passing through our body at close to the speed of light all the time. But as their interaction with matter is so minimal – a neutrino from the sun would go around 500 light years through lead before interacting – they are very difficult to study. But that could be about to change thanks to a new multi-million pound initiative between the UK and US.

Professor Giles Barr, Tutorial Fellow in Physics at Magdalen, and his team will be firing neutrinos from the Long-Baseline Neutrino Facility at Fermilab in Illinois to the Deep Underground Neutrino Experiment (DUNE) detector at the Sanford Underground Research Facility in South Dakota to try to understand what is really happening with these strange ‘ghost particles’.

The DUNE detector will generate over a terabyte of data every second, from which Professor Barr and his colleagues will be collecting information on how neutrinos oscillate between their three types (electron, muon and tau); in particular the different way in which neutrinos and their antimatter equivalents, antineutrinos, oscillate.

If differences in oscillation are discovered, it could help to solve one of physics’ biggest problems: if the Big Bang created equal amounts of matter and antimatter, why is there so much more matter in our universe. In other words, Professor Barr’s research could help to explain why we exist.

“Professor Barr’s research could help to explain why we exist”

Therapy technology

According to the most recent Adult Psychiatric Morbidity Survey, one in six adults in the UK suffers from a mental health problem. One of the most common of these is social anxiety disorder. Social anxiety disorder is an overwhelming fear of social situations. Much more than simple shyness, it is a distressing and long-lasting problem which self-help alone will often not overcome.

The good news is that there is an effective treatment for social anxiety disorder called cognitive therapy. However, accessing cognitive therapy often means those with social anxiety disorder having to enter the very situations they want to avoid. But thanks to research by David Clark C.B.E, Professorial Fellow in Experimental Psychology at Magdalen, we know now there is an equally effective alternative to visiting a therapist: accessing one online.

Results have shown that online cognitive therapy, or ICT, which uses traditional methods, including video feedback, attention training, behavioural experiments, and memory-focused work, is just as effective as face-to-face therapy. And as the time spent with each patient using ICT is only 20% of that in face-to-face therapy, Professor Clark’s innovative idea will enable therapists to help more people.

To make sure that those with the best ideas continue to come to Magdalen, we must celebrate our past and invest in our future. Some of the greatest minds of science and technology have passed through our doors; our investment in the Schrödinger Building and the Oxford Science Park will ensure they continue to be part of the Magdalen community.

If in 50 years’ time the history of innovation becomes a book, we are doing all we can today to have a member of our community on every page.
Magdalen College is custodian to some of the most important scientific books ever produced – books that overturned years of doctrine to shape the way we view ourselves, the world, and our place in the universe. Librarian Daryl Green explores the impact of ten science and technology first editions in our collection.

Ten books that changed the world

Physica by Aristotle (1472)

Physica is the 4th century BC work of Aristotle which lays the bedrock for much of the medieval and early modern understanding of our natural world. It was originally divided into eight books on the definition of nature, motion, space and time, and the soul.

It was copied in manuscript numerous times in the Middle Ages, and Magdalen’s late medieval library certainly had a handful of copies of Aristotle’s texts, as well as over half a dozen commentaries and translations. Many of these books can still be found in our Old Library.

By the 15th century, Aristotle had been studied so closely that many of the individual books of Physica took on a life of their own, with the philosophical underpinnings closely scrutinised by divines and natural physicians alike. The text’s popularity continued with the onset of the printing press and its continued teachings at medieval and Renaissance universities.

Magdalen holds a number of 15th and 16th century copies of the text in print, including this one, the first ever printed edition of 1472.

De Revolutionibus by Nicolaus Copernicus (1543)

In October of 1541, mathematician Georg Rheticus travelled 700km from north east Poland to the University of Wittenberg carrying a manuscript copy of one of the major game-changing texts of the scientific world.

Three years previously, Rheticus had taken a leave from his lectureship in Wittenberg at the urging of his sponsor and educator, Philipp Melanchthon, in order to study with astronomers and mathematicians in Nuremberg, Ingolstadt and Tübingen. It is most certainly on this sojourn that Rheticus learned of Nicolaus Copernicus, who was at that point relatively unknown outside the scientific community.

Rheticus had travelled over 1,000km from central Bavaria to northern Poland because Copernicus’s ideas, which stood in direct opposition to contemporary thought, had begun to attract attention from Europe’s astronomers and mathematicians.

Copernicus’s theories stipulated that not all celestial bodies revolved around a single point, that the moon orbited the Earth and, most importantly, that the Sun, and not the Earth, was the centre of the planets’ orbit. His theories directly challenged Ptolemy’s Earth-centric model of the solar system which had widely been accepted since before the Christian era.

Rheticus spent two years in Poland under the tutelage of Copernicus, returning to Nuremberg in May of 1542 bringing the manuscript to his old friend and printer Johannes Petrejus. Work began on the book at once. Over 140 woodcut illustrations needed to be made and the printing and proof-reading of a scientific work was a laborious process.
Printing finished on 20th April 1543 and one of the four to five hundred copies that were produced was sent at once to Copernicus, then on his deathbed.

Copernicus’s printed work was widely read but received severe criticism from the Protestant Church and from Melanchthon (the same who had first sent Rheticus on his journeys). The Catholic Church also placed it on the Index of Prohibited Books in 1616, it must have been shortly before then that alumnusArthur Throckmorton (1571) acquired the copy that can now be found at Magdalen.

**De Humani Corporis Fabrica by Andreas Vesalius (1543)**

1543 was quite the year for scientific texts. Not only was Copernicus’ *De Revolutionibus* printed in Nuremberg, Andreas Vesalius’s *De Humani Corporis Fabrica* was also published in Venice.

Vesalius’s *Fabrica* change the way that human anatomy and biology was understood, taught, and perceived in universities across Europe. Vesalius knew the European medical community well, having studied and taught at Pavia, Leuven, Paris, Padova, Bologna and Pisa.

The publication of *Fabrica* required him to relocate to Basel to oversee the text and illustrations for his seven-part work on descriptive anatomy. Over 270 woodcuts were produced to illustrate Vesalius’s text, and it is the combination of his new analytical method and eye-witness knowledge, and the realistic illustrations that propelled anatomy into a modern science accepted by academia.

As proof to that, Magdalen’s copy of the first edition of the *Fabrica* was purchased in 1545, and still survives in its 16th century binding. Our copy of this text bears all the evidence of having been well-read and possibly even used in teaching early modern anatomists.

**Historia Plantarum by Theophrastus (1644)**

The work of ancient natural philosophers Theophrastus and Dioscorides on the history of plants established the medical uses of plants, and their scientific understanding for over 1,000 years, and continued to be highly influential to Renaissance and early modern botanists and medical students.

Many early printed editions of both authors were in Magdalen’s library by the late 15th century, however the most influential of these editions was this sumptuously illustrated 1644 Amsterdam edition of Theophrastus by Johannes Bodaeus.

Fully illustrated with woodcuts, and adorned with commentaries, the 1644 *Historia Plantarum* was one of the key reference texts for any botanist or medic in the 17th century.

Magdalen was fortunate enough to benefit from the library of one such practitioner, John Goodyer, who bequeathed his collection of over 230 botanical works in 1664, one of which was this wonderful book.

**Systema Cosmicum by Galileo Galilei (1632)**

*Systema Cosmicum* is a compendium of Galileo’s greatest hits, a collection of astronomical blockbusters, and a book that got its author imprisoned.

Galileo’s original Italian *Dialogo* was published in 1632 and, because of its stance on the Copernican helio-centric model of the universe, immediately caught the attention of the Catholic Church.

Banned by the Pope, the work was translated into Latin by Galileo’s friend Matthias Bernegger and published in Strasbourg (whose presses were out of the direct influence of Rome), with a later edition of 1641 including appendicies by Johannes Kepler and Paolo Foscarini, and widely distributed amongst astronomical and natural physics libraries of the 17th century, including the shelves of Magdalen College.
**Micrographia by Robert Hooke (1665)**

Just as Galileo was pointing his newly-designed telescope to the heavens, Dutch engineers were hard at work developing the first compound telescopes which first came into use in Europe in the 1620s.

The first major publication of the nascent Royal Society was by one of its most active participants, Robert Hooke. Hooke trained under Thomas Willis and John Wilkins in Oxford in the 1650s, and was appointed as the Curator of the Royal Society shortly after its foundation.

Hooke spent several years as Curator conducting observations and experiments with a specially commissioned compound microscope, putting everything from plants and insects to needles and razors under the lens.

Hooke published his observations, complete with extremely detailed engravings of his findings, including most famously the louse and flea; he also coined the term ‘cell’ when doing close examinations of dissected plants.

*Micrographia*, released in 1665, quickly became a best-seller and buoyed the Society’s publication programme for years to come. The plates seen today are still striking to behold – the level of detail and fidelity to the observations through the lens are exceptional for a scientific work of the 17th century.

**Philosophical Transactions of the Royal Society (1665)**

Fellows, tutors and students of Magdalen have long found themselves at the centre of British, European, and global scientific debates. One of the original fields on which scientific discourse and method were played out was the publication of short papers, or later articles, in journals edited by learned societies.

The fledgling Royal Society, established in 1660, began to publish accounts of the meetings and lectures delivered in 1665 with their *Philosophical Transactions of the Royal Society*, making it the first journal devoted exclusively to science.

The journal, still in publication today under two titles, is now the longest running scientific journal ever published, and has seen many members of the Magdalen community contribute, including George Smith Gibbes, Peter Baxter, James Binney and Thomas Smith.

Magdalen has long been a subscriber to the Society’s publications and has a complete set of the Philosophical Transactions from the first volume.

**Philosophiae Naturalis Principia Mathematica by Sir Isaac Newton (1687)**

‘Genius’, ‘Connected to the universe’, ‘Most influential scientist of all time’, ‘Greatest physicist ever’. These are just some epithets commonly found accompanying Sir Isaac Newton’s name and legacy.

**The Double Helix by James Watson (1968)**

Newton’s life work in physics, mathematics, and mechanics changed the way that the world was perceived.”

Newton’s life work in physics, mathematics, and mechanics changed the way that the world was perceived, the way that we understand the physical make-up of our existence. This book set down his four laws of motion, as well as a new, rigorous philosophy of scientific reasoning that would come to dominate scientific inquiry and observation for the next 300 years.

In 1669 Newton was elected to replace Isaac Barrow as the Lucasian Professor of Mathematics (Trinity College, Cambridge), a chair which he retained until 1702. After a long correspondence with Edmund Halley, Newton was persuaded to write a full treatise on his new findings in physics and its application for astronomical observations. On 5th July 1687 the book was published, bringing about a new understanding of the physical world and establishing Newton’s name amongst the world’s foremost scientists.

Magdalen’s copy of the first edition comes from the working library of Charles Daubeny, Professor of Chemistry and later Sherardian Professor of Botany (1834-1867) and Fellow of Magdalen. Many of the great scientific books in the College’s collections come from his bequest.

**What is Life? by Erwin Schrödinger (1944)**

In 1933/34, Erwin Schrödinger delivered a series of lectures at the Dublin Institute for Advanced Studies at Trinity College on the subject of applying the laws of physics and chemistry to the understanding of space and time, and the genetic make-up of our existence. Schrödinger, who was a fellow of Magdalen in the 1930s, postulated that the key to our inherited genetics lie in chemical bonds within, an idea he termed as “aperiodic crystals”.

The theoretical biological framework he put forward in his lectures, and later this book, would inspire James Watson and Francis Crick to propose and later confirm the double-helix structure of DNA.

**Learn more about the College’s remarkable collection as a Friend of Magdalen Libraries & Archives.**

For details visit magd.ox.ac.uk/libraries-and-archives
(Right) Richard (back, left) and Alex (front, centre) with pupils from Harris Westminster Sixth Form on an outreach visit to Magdalen.
Richard’s story

“It just felt very welcoming,” remembers Richard of his first impression of Magdalen. “I’d been interested in maybe going to another college at Cambridge, but it just seemed so austere. Magdalen had a good overall feeling.”

Richard had studied at Eastbourne College, an independent school on the south coast which he describes as ‘good, but certainly no Westminster or St Paul’s’. “It was great for sport, but it didn’t have the academic reputation it does now.”

Eastbourne had sent a small number of pupils to Oxford in its time, one or two a year, but Richard certainly wasn’t expecting that he would be one of them.

“It was bizarre,” he laughs. “The Choir Master saw that I was bright and that I could sing, and suggested I try for a Choral Scholarship. He was super keen. He had sent singers to Oxford in the past, every four or five years or so, without much success.”

Richard remembers the day of the choral audition as one of the most nerve-wracking of his life. “It’s still very clear in my memory: I went to the Queen’s Lane Coffee House for a cookie and a cup of tea beforehand. I was so nervous.

“Bill Ives was the Informator Choristarum at the time. He had a great reputation. He’d sung with the King’s Singers, so I was really keen to work with him,” he explains.

“The audition process meant I had to sing with a bunch of professional singers, so I felt like an absolute fraud,” he laughs. “I sang the Magnificat by Robin Orr which is impossibly difficult, but I must have done okay because I was offered the Scholarship.”

Despite neither of his parents studying at Oxford, Richard has a familial link with the University. His great-grandfather, G B Grundy, taught Classics – the subject area Richard had chosen to study at Magdalen – at Corpus Christi and Brasenose. Richard studied Classical Archaeology and Ancient History.

“My tutor Dr Al Moreno knew about my great-grandfather,” explains Richard. “His tutor had been taught by Oswyn Murray who had in turn been taught by my great-grandfather! It was a very weird coincidence.”

Richard has many fond memories of Dr Moreno. “I remember him being very understanding the morning after my rugby initiation,” he laughs. “He was very good-humoured about it. He is a very nice guy.”

As well as being vice-captain of the rugby team and singing in the Choir, Richard played football, hockey and was a JCR charity rep. “I remember running the ‘all you can eat for £5’ Pancake Day events,” he says. “All the rowers would turn up and eat everything!”

Richard had a great time at Magdalen and when Bill Ives suggested he audition to be a tenor in the Choir when he graduated, he jumped at the chance. “It was a great time for me. I was singing in the Choir and working at Magdalen College School,” he explains. “I was being paid to do two things I loved.”

Harris Westminster Sixth Form state school teachers Richard Ogden (2005) and Alex Ryzak (2009) share their memories of Magdalen and discuss the importance of outreach on a trip back to College.
“Trips like this help to demystify Oxford, they make Magdalen seem more welcoming”

It was also at this time that he met his partner Scarlett Benson (2008) who was studying at Magdalen a couple of years behind Richard. “If it wasn’t for the Choir I never would have met Scarlett.”

Richard also wouldn’t have met some of his closest friends who were all in the Choir with him at Magdalen and all keen sportsmen. “We still sing together in a group called the Oxford Clerks,” he explains. “My friendship group is mainly made of Magdalen alumni.”

After his time at Oxford Richard worked in consultancy in London, spent some time in China, and ‘taught a billionaire Ancient History on a yacht in the Aegean’, before starting work at Harris Westminster Sixth Form as a History teacher where he has been for the last year.

“I’m one year in and it’s amazing. The teachers are incredible. I learn so much every day; especially from those who went to Magdalen,” he laughs. As well as working with Alex, Richard’s boss is a Magdalen alumna, Rebecca Edwards (2009), the Head of Humanities Faculty.

This visit was the third to Magdalen for Harris Westminster, but the first time Richard has been back with his pupils. “I felt very proud to bring them to College,” he says. “It meant a lot to those who went to Magdalen,” he adds. “I met a group of people who were interviewing at the same time who all seemed really friendly and we just hung out together. In fact I had a really good time.”

Alex went home pleased with her performance but not really expecting to be offered a place. “My family were very supportive, but everyone told me not to get my hopes up. ‘They’re looking for more than just good grades, Alex’ they told me. Everyone was so surprised when I got an offer to study PPE. I was so excited.”

Alex was determined to get the most from her time at Magdalen. “I was Entz Officer in my first year, JCR Treasurer in my second, captain of the women’s football team, and I worked in the JCR tuck shop.” She also made some ‘lovely friends’ with whom she is still in contact.

“I loved it. There were so many bright people,” she says, “but I never felt intimidated. The conversations I had at Magdalen felt more like me than any I’d had at home.”

“If you’ve never met anyone with the same interests as you before, and then you suddenly meet people with exactly the same interests, you just want to talk all the time; to nerd out.”

Two of Alex’s College friends would go on to play a huge part in her life. The first was Rebecca Edwards (2009), the second, Matthew McGhee (2009).

“Rebecca was my first and best friend. She did History and Politics, so we had lessons together,” she explains. “Our rooms were close in the Waynflete Building in the first year, and we lived next to each other in St Swithin’s the following year. She’s now my boss at Harris Westminster, and Matthew and I recently got engaged.”

After College, Alex and Rebecca moved to London together. Alex was working as a pay consultant whilst Rebecca was starting out as a teaching assistant. “I worked for a small company which got bought by a bigger company. I did an MSc in Human Resource Management during my time, but I soon realised that it wasn’t the job for me.”

By this time Rebecca was Head of Humanities Faculty at Harris Westminster Sixth Form and she suggested that Alex come and join the team as an Economics teacher. “I weighed up the pros and cons of working with my best friend as a boss,” she laughs. “But I knew it would be brilliant working with her. She is a fantastic teacher; learning from her is easy.”

After a year in the role Alex is committed. “I am really enjoying it,” she says. “I feel like we are doing important work. We are taking people who may not think of themselves as scholars and saying to them, ‘You are clever, you should go to university’. The students are great; they are really funny.”

“I was excited when I heard about the trip to Magdalen,” says Alex. “It’s important for our students to visit Oxford. It’s sometimes easy to forget that if you don’t know anyone who has been to Oxford coming here can seem unachievable. I tell them ‘I went to a state school like you and I came here’. “I was trying to get them excited about Oxford rather than scared; it’s an exciting place! It is better to be excited than intimidated. It certainly worked for me.”

“Alex’s story

When Alex submitted her online application to Oxford she was surprised when a message popped up asking her to choose a college. “No one had told me I would need to,” she explains, “because no one I knew had been to Oxford.

“My parents didn’t go, and I was the first person at Ramsey Grammar School to apply. I didn’t really know what to do, but I got good grades so I thought, ‘I might as well try’.” Alex makes the decision sound like an easy one, but being a pioneer takes courage. “It was more obliviousness than courage,” she laughs. “You’re not scared because you don’t know that it could be horrible.”

Whether it was courage or obliviousness the approach certainly worked for Alex on the day of her interview. “I didn’t find anything scary about being at Magdalen on the day,” she explains. “I met a group of people who were interviewing at the same time who all seemed really friendly and we just hung out together. In fact I had a really good time.”

Alex went home pleased with her performance but not really expecting to be offered a place. “My family were very supportive, but everyone told me not to get my hopes up. ‘They’re looking for more than just good grades, Alex’ they told me. Everyone was so surprised when I got an offer to study PPE. I was so excited.”

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“The conversations I had at Magdalen felt more like me than any I’d had at home”
We’re missing you

We have very little in the College Archive which documents the student experience at Magdalen and we need your help to fill the gaps.

This is partly to help provide material to mark 40 years of female students at Magdalen next year, but also to build a strong archive for future generations.

• Did you keep a diary?
• Take photographs?
• Make films/recordings?
• Send regular letters home to your family?

Please search your attics, cupboards and computers for anything which records your time at Magdalen, however recent or distant.

Academic work. Records of student societies. College magazines and newsletters. Posters and programmes. Menus and tickets. We need them all!

If you’d like to donate items to the College archives (or loan items for digitisation), please get in touch with the archive team: archives@magd.ox.ac.uk or (01865) 276088.

We’d love to hear from you!
Tools of my trade

College Archivist
Charlotte Berry shares some of the unusual and useful items in the Archive

1 Glastonbury Abbey seal. This is probably the only contemporary impression of the second common (i.e. institutional) seal of Glastonbury Abbey. It is attached to a land deed dated 7th July 1277. Three years ago we showed it to an academic who specialised in medieval seals. “I have been looking for this”, he said, “for nine years!”

2 Illuminated deed and bird-patterned seal bag. In the 14th century, the priory of Sele in Sussex was seized by the Crown because it was a scion of a larger monastery in France, with which England was then at war. This document of 1396 authorises its naturalisation, securing its future as a monastic institution. The great seal of Richard II is protected by a rare, beautiful and superbly preserved bag of embroidered silk.

3 Photo of Erwin Schrödinger. (Read more on pages 15 and 21)

4 Poster for College Ball 1973, featuring Doctor John and Fairport Convention. Our accessions register does not record the identity of the donor of this striking poster, noting only that it was given in 2009 by “an Old Member”. Was it you?

5 Daguerrotype of President Routh, taken on his 99th birthday. Martin Routh was a member of the College for an astounding 83 years. He began as a Demy in 1771, was elected a Fellow on his graduation and finished his career with an unmatched 63-year tenure as President, until his death in 1854.

6 William Dunn Macray’s catalogue of the medieval muniments. Macray (Clerk 1844-1850, Chaplain 1856-1870, Fellow 1891-1916) was a Victorian polymath and has been described as “one of those somewhat hyperactive Victorians whose energy leaves later generations panting in their wake”. Macray worked on the College’s 12,000 or so muniments (or deeds) between 1865 and 1878 and his catalogue is still used daily.

7 Archive tape is a staple tool of any archivist. It is usually made of unbleached dye-free acid-free cotton of archival quality so that its colour won’t bleed. It can be used for a multitude of things including tying up large bundles of loose papers or binding up bound volumes. No archivist will be found without it.

8 Brass paper clips are an archivist’s best friend. Ordinary paperclips rust and stain, and can sometimes weld themselves to documents, making it impossible to remove without ripping the paper. Brass paperclips, on the other hand, do not rust.
2B pencils are the equivalent of an archivist’s stethoscope. Always to hand and ready for work. The soft lead is simple to erase, so it is ideal for writing on paper and parchment in case mistakes are made or items are re-numbered later on. It is essential to label all archival items for future identification as soon as possible, as there are thousands if not millions of letters, deeds, photographs, maps and other goodies in the College’s archive collections.

This photograph of Edward, Prince of Wales running along the towpath during Eights Week is taken from an album owned by Henry Bensley Wells (1909), one of the MCBC’s most distinguished members. He coxed three victorious Blue boats in 1911-13, and won gold with his crew in the rowing eights event at the 1912 Stockholm Olympics. Although he had a cox’s build, Prince Edward was not a boatie himself, but was a keen follower of the MCBC.

This covering note on a Buckingham Palace headed postcard dated 8th July 1914 was written to accompany photos taken by Edward, Prince of Wales during an OTC training camp in the summer of 1914. The letter was written less than three weeks before the outbreak of the First World War.

These are only a few of a large collection of menus and ball cards, including many collected by Joseph Gynes, who was JCR steward from 1914-1931. The collection provides a valuable insight into the College’s social life. Do you have any you could donate to the Archive?

Contact the archive team at archives@magd.ox.ac.uk or (01865) 276088
It’s 6.30am on a bright May morning at the Radley College Boat House. Despite the sun’s best efforts it is still bitterly cold, and Maria and the Magdalen women’s first VIII are wrapped up with scarves and gloves as they push out onto the Thames for a training session.

They’ve already cycled five and half miles from College to get here this morning, and after a gruelling hour on the water, they’ll be cycling back again. Today is no exception. Maria and her team will spend between 15 and 18 hours training every week.

For anyone who just knows Oxford rowing from Saturdays at Summer Eights, it’s easy to forget the dedication and stamina it takes to compete for your college. But despite the blisters and the bumps, Maria thinks there are plenty of reasons to row.

“Getting involved with rowing is a great way to meet new people,” she explains. “Not only freshers, but students from different year groups. I went along to the taster sessions and fell in love with it.”

Maria is from Kalisz, a city in central Poland. At 15 she moved to France, and two years later started an International Baccalaureate at Malvern College in Worcestershire. She was always very active growing up and has enjoyed a wide range of sports throughout her life.

“I come from a sporty family. My mum used to compete in various athletics events and my dad was always keen for us all to explore new activities,” she explains. “A lot of our family time involved being active in one way or another, swimming, ice skating, horse riding, rock climbing, and canoeing.”

“But I’d never rowed before,” she says. “I knew it was important to make sure I didn’t end up spending my days confined to the Library, and rowing is an amazing sport for that; no matter the season or weather, we always train outdoors. That’s why I chose it.”

After a year of rowing for Magdalen, Maria decided she wanted to become more involved with the management side of the MCBC so put herself forward to become women’s captain.

“It seemed like the correct decision,” she explains. “I just wanted to become more involved with a club that I loved being a part of so much.” But becoming captain meant more pressure on Maria’s time.

“It’s definitely a big commitment,” she says. “The training alone takes up so much time, and then there are the responsibilities of captaincy on top. It definitely requires good time management.

“Being captain has taught me how to cope under pressure and how to make the most of my time,” she explains. “I try to keep both my personal, and the squad’s, schedules very organised.

“I was also lucky to have some amazing friends on the MCBC committee with me who were always happy to help me out if I had deadlines approaching!”

Maria would one day like to work for an NGO and the leadership lessons she is learning today as captain of the women’s team will give her a headstart in her career.

Maria thinks the biggest lesson she has learnt is the importance of teamwork, on and off the water. “Team spirit and cohesion are crucial in rowing,” she says. “You need to move as a unit.

“To achieve that you need to spend time together, to really get to know one another. I’ve been really lucky. I’ve met some truly incredible, inspiring people and made some of my closest friends here thanks to rowing. I would encourage anyone coming to Magdalen to row.”

Learn more about the MCBC at magdalenboatclub.co.uk
Leading questions

Dr Barbara Domayne-Hayman (1980) completed her BA in Chemistry and DPhil in Bio-organic Chemistry at Magdalen College. Since then she has enjoyed a successful career in the biotech industry and is currently working as, amongst other things, Entrepreneur-in-Residence at the Francis Crick Institute, helping scientists develop their ideas for market. She is a member of the Magdalen College Development Trust and a donor to Magdalen.

What brought you to Magdalen?
I spoke to a number of tutors in various colleges, in both Chemistry and Music, as I was undecided as to which subject to read until very late in the process. Dr Mike Robinson (Chemistry and Admissions Tutor) was particularly helpful – and I fell in love with the Cloisters!

What were your first impressions?
Everyone was very clever and knew much more chemistry than I did! It was the second year of women at Magdalen, so when I arrived the feel of the place was basically that of a men’s college with a few women added in. But I found the atmosphere welcoming and rapidly got to know some interesting people.

What is your fondest memory of your time here?
Playing the harp in Mozart’s Flute and Harp Concerto with Bernard Rose conducting, for his retirement concert in the Chapel, is certainly one of the high points. Music was always a very important part of my life in College. Otherwise - the many late evenings hanging out with friends,...

Did you have a favourite place when you were at Oxford?
Magdalen was always my favourite place, I felt so lucky to be surrounded by the beautiful buildings and grounds, the deer and Addison’s Walk.

What effect did Magdalen College have on your life?
The tutorial system taught me to be independent and resourceful, and to hold my ground in discussions with people who knew far more about the subject than I did. It was great for building self-confidence.

What did you do when you left College?
I stayed on after my undergraduate degree for a DPhil on penicillin biosynthesis. Working in the lab every day was more like having a job, and I was less involved in the College. I enjoyed my DPhil, but decided that I didn’t have the right temperament for academic research, so went into marketing in the life sciences industry, initially in a large company (ICI).

Then London Business School opened my eyes to the world of entrepreneurship, and I decided to combine this with my science background and general commercial experience to go into the world of biotech. I now get to work with brilliant scientists, and learn about cutting edge science but without having to do any experiments myself! I love building companies that are trying to solve serious medical problems, and it’s very much a team sport.

What would you say are the first steps in developing a scientific idea into a business?
Having an innovative technology is not enough - understanding the need that it is aiming to fulfill and who will pay for it is essential, as is building a great team who pull together to make things happen. The path is never straightforward. Of course you have to raise finance, but if you get the other things right, that should follow.

What made you become a donor to Magdalen?
I want to help the next generations enjoy the same good fortune that I had. I’m particularly interested in supporting chemistry, bioscience, entrepreneurship activities, and the musical life of the College, as well as the Student Support Fund.

What advice would you give a Magdalen Fresher?
Work hard but make sure you take advantage of the unique opportunities that Oxford has to offer. Whether in sport, music, drama or whatever your interests might be, you can always find a group of like-minded people. You don’t want to look back and think ‘If only…’. And of course, spend time in building friendships – some of these will last a lifetime.

‘It was the second year of women at Magdalen, so when I arrived the feel of the place was basically that of a men’s College with a few women added in’
What do you most enjoy about your job?
The variety – no two days are the same and there is such a range of things I am responsible for. One minute I’m seeing a student about some additional grant funding for a club, the next I’m off to a University strategic committee, then back for, say, another round of the jigsaw that is senior members’ room allocations.

What has been your biggest challenge?
Keeping on top of email. It is ceaseless and all of it needs looking at if only to bin it (usually things you have been copied into for no obvious reason). On an average day in term time I will deal with 180-200 emails. Much of it needs a quick turnaround and much of it is answering queries that people could look up for themselves!

But more broadly it is about ensuring a good experience for our students, Fellows and staff. We do things very well here, excellence is a by-word, but I/we need to keep up with the times.

What has been your highlight?
The visit of HM the Queen and HRH The Duke of Edinburgh in November 2008 to mark the College’s 550th anniversary. They came for lunch, met lots of members in small groups; and it was a marvellous day.

What is your favourite part of College?
As I say to the freshers at the start of each Michaelmas term, you have chosen the most beautiful college in Oxford, we know this because the guide books say so. I never tire of walking through the grounds – the combination of the architecture and the gardens, river and general setting, and knowing this is a place of study is just fabulous.

What does Magdalen mean to you?
A place of excellence in every sense. We all strive for it, whether student, Fellow or staff member. I do what I can to facilitate that and to encourage it. It is a privilege to work in such a purposeful environment.

Tell us something about yourself that not many people know.
Well it can’t be rowing, I think everyone knows that…. I love the far north highlands of Scotland – the open space, awesome (in the proper sense of the word) scenery and the peace. If I’m not in College or at a regatta, I’m likely to be somewhere in Sutherland.

Is there anyone you would like to thank?
My PA – Celia Brown. She keeps me in order and deals with so much I don’t see. Celia is a great diplomat which is an essential quality. Her predecessor Marilyn Evans who held the role for 25 years and retired three years ago brought the same skills and always had my thanks too.

If you could go back in time, where would you go?
This is a difficult question to pinpoint an answer. In Magdalen terms I think it would be the early 1500s as the College was becoming established – it’s hard to really imagine life then. I’d love to know what it was like and how the College, University and City functioned.

How do you relax?
I used to play rugby to relax but my joints rebelled many years ago so now I enjoy reading, though it tends to be non-fiction from my collection of 400 books on rowing.

How would you describe your perfect day?
One where I achieve all that I set out to do at work and my inbox is empty when I go home – rare! Once home, a glass or two of fine wine with dinner.

Inside job

Mark Blandford-Baker has been at Magdalen for 17 years. As Home Bursar he is responsible for overseeing domestic operations including catering, gardening, housekeeping and maintenance. Mark has a passion for rowing and has written a number of books on the subject including Upon the Elysian Stream: 150 Years of Magdalen College Boat Club

“ If I’m not in College or at a regatta, I’m likely to be somewhere in Sutherland”
Crossword
Set by Professor Simon Horobin

Dissertations written in absinthe sessions (6)

Across
1 Deans finally suppress racket? (6)
5 Plot to incriminate gets support for lying (3,5)
9 Fool returns with second hint for secret code (8)
10 Attempts written work (6)
11 Dispute follows Christ Church fight with garden visitor? (5,7)
13 Knock back too much French wine (4)
14 Overconfident, cooking tarragon (8)
17 Ghastly clarets distributed around end of bop (8)
18 Relative, Agatha perhaps, not a gentleman, according to fictional Magdalen alumnus (4)
20 Where unsuccessful Art student must return (7,5)
23 Secure accommodation for demy finally, in a dump! (6)
24 Retreats following broadcast - make a getaway here? (8)
25 Fellow blows top at outskirts of Cambridge, heads off straight to railway line (8)
26 Dissertations written in absinthe sessions (6)

Down
2 Force head of SCR to leave part of College (4)
3 Stylish tea chest I restored (9)
4 Get together heads of Hertford and Oriel over tolerable drinks - no seconds! (4,2)
5 Oxford bookstore where Kindle Fire is not permitted? (8,7)
6 Look dim, according to Spooner, in part of College that’s good for browsing (4,4)
7 One getting up during dinner is erroneous (5)
8 Seasonal celebration in College could be followed by sound of regret (3,7)
12 ‘A Consideration of Similarities in Openings of Catullus, Ovid, Milton’. Standard is concerning... (10)
15 ...Ambitious in conception, poorly organised (9)
16 Pass exercises? One dropping out at US University (8)
17 Cake sweetener? (6)
18 Filthy room, last in Waynflete, is an eyesore (4)

Bully is from Dutch boele ‘lover’ and was originally a term of endearment. Its later use as a term of admiration between male friends probably led to its modern sense development

Geezer is a dialect pronunciation of guiser ‘one who goes in disguise, a masquerader’

Please send your completed crossword along with your name and year of matriculation to: Development Office, Magdalen College, Oxford, OX1 4AU or email it to alumni.office@magd.ox.ac.uk
The first correct entry drawn on Mon 10th Sept will receive a copy of How English Became English: A short history of a global language by Professor Simon Horobin.

Quiz probably originated in public school slang and referred to something odd or ridiculous, then to a practical joke or hoax. Our modern usage first appeared in 19th-century America, perhaps under the influence of inquisitive

Follow @SCPHorobin for more
Forthcoming events

Did you know...

All our events are priced to break even or are subsidised. We want all alumni to be able to attend events where possible, so if you would like to attend a particular event and are not in a position to do so, let us know as we may be able to further subsidise a limited number of places on a case-by-case basis.

If you have access to a venue we could use for an alumni event or any recommendations, please contact alumni.office@magd.ox.ac.uk

2018:

Saturday 8th September:
Modern Languages Dinner to mark Toby Garfitt’s Retirement
Speaker Catriona Seth (1982), Marshal Foch Professor of French Literature & Fellow of All Souls College

Saturday 15th September:
50th Anniversary Tea for 1968 matriculants

Saturday 15th September:
Alumni Dinner in College
Speaker Baroness Harding of Winscombe (1985), Chair of NHS Improvement and former chief executive of the TalkTalk Group

Saturday 23rd September:
1958-62 Gaudy
Speaker Jim Campbell (1958), former Lord Mayor of Oxford

Friday 5th October:
Private Tour of Knole House by Lord Sackville (1976)

Friday 9th October:
Alumni Formal Hall

Sunday 4th November:
Careers Conference
For students and early career alumni

Friday 9th November:
Alumni Formal Hall

Wednesday 21st November:
Alumni Formal Hall

Saturday 8th & Sunday 9th December:
Carols by Candlelight

Sunday 16th December:
Carols by Candlelight for Friends of the Choir and Alumni
Priority booking for Friends of the Choir

For more information see
magd.ox.ac.uk/alumni-friends/events

2019:

Friday 1st February:
Alumni Formal Hall

Saturday 9th February:
Scholarships & Bursaries Lunch

Friday 15th February:
Alumni Formal Hall

Wednesday 27th February:
Alumni Formal Hall

Saturday 16th March:
Benefactors’ Gaudy
For Waynflete Benefactors

Saturday 23rd March:
1986-88 Gaudy

Friday 17th May:
Alumni Formal Hall

Saturday 18th May:
Fastolf Society Lunch
For Legators to the College

Friday 31st May:
Alumni Formal Hall

Wednesday 12th June:
Alumni Formal Hall

Saturday 6th July:
2000-2002 Gaudy

Saturday 14th September:
40th Anniversary of Women

Saturday 21st September:
50th Anniversary Tea for 1969 matriculants

Saturday 21st September:
Alumni Dinner

Saturday 28th September:
1997-99 Gaudy

Friday 1st November:
Alumni Formal Hall

Friday 15th November:
Alumni Formal Hall

Wednesday 27th November:
Alumni Formal Hall
The conversations I had at Magdalen felt more like me than any I’d had at home”

Alex Ryzak (2009) shares her memories of Magdalen