UNIVERSITY OF OXFORD

Annual Review

2017–18

FRONT COVER AND THIS IMAGE

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4
Education

8
Research and innovation

14
People

16
Engagement and partnership

18
Development and Alumni

22
Finance

Education

Access and admissions

Diversifying the undergraduate student body at Oxford is a commitment that unites its colleges and departments. Selecting from the widest possible pool of talent strengthens the University's intellectual vitality and ensures Oxford continues to thrive. While Oxford is making progress in attracting more successful applicants from under-represented groups, there is a strong consensus that one of the University's top priorities should be increasing the pace of progress and addressing perceptions that Oxford is not fully committed to change.

A key initiative in demonstrating the University's commitment to transparency and accountability when it comes to its record on undergraduate admissions and access was the publication in May 2018 of the inaugural Annual Admissions Statistical Report. This presented a detailed picture of Oxford's British undergraduate intake over a three-year period, focusing in particular on under-represented groups.

The report highlighted the progress the University is making: between 2013 and 2017 the number of ethnic minority students admitted increased by 24%, and the number of students from the most disadvantaged postcodes admitted to Oxford increased by 50%. The detailed statistics also showed areas where progress has been more uneven, particularly when looking at figures across colleges and courses.

The University is committed to increasing the pace of change in widening Oxford's undergraduate intake. The University is in the process of agreeing a set of ambitious targets to substantially increase the number of undergraduate places offered to students from under-represented groups. As part of achieving these targets, Oxford will improve its coordination of outreach activities and expand some its key initiatives, including the flagship UNIQ summer school.

The largest university summer school of its kind in the UK, Oxford's UNIQ began in 2010 with the aim of supporting the academic ambitions of talented state school students. It has transformed the lives of thousands of students and changed the face of Oxford – and is now due to expand even further.

The free summer school gives 16 and 17-year-olds the opportunity to study at the University, engage with tutors and undergraduates, stay in a college, learn how to make the best possible application and prepare for interview. It is designed to break down the barriers that talented students from under-represented backgrounds tell us can discourage them from applying to Oxford – such as familiarity, confidence, perceptions of the University, and myths about the interview process.

Since 2016 selection for the summer school has become more rigorously targeted at students from backgrounds that are under-represented at Oxford: priority is given to students from low socio-economic status backgrounds and areas with low progression to higher education.

UNIQ is Oxford's most significant access initiative – both in size and impact. Since it began more than 1,300 UNIQ participants have gone on to study at Oxford. An evaluation in 2016 by the Institute of Employment studies found the evidence of UNIQ's effectiveness to be 'clear and positive', particularly its effectiveness at transforming a student's chances of success in the Oxford admissions process. UNIQ students now have a 34% chance of successfully applying to Oxford, compared to the average UK rate of about 20%.

Around 1 in 18 first-year UK students at Oxford now come through UNIQ, and the number is set to grow. Starting with its tenth summer school in 2019 the programme will expand by 50%, bringing the total number of places offered from 850 to 1,350 students per year. UNIQ's expansion will be funded from the generous donation made to Oxford by businessman and philanthropist Sir Michael Moritz and his wife, novelist Harriet Heyman.

On top of the extra places, the University is also piloting UNIQ Digital. Students will be able to stay in touch with the University after their week at Oxford, receiving on-line mentoring, encouragement and advice in the build-up to making their applications. UNIQ Digital will also be available to a further 1,000 students who missed out on a school place.

Comparison of how many places were offered to applicants

- 34% of UNIQ applicants were offered places*
- 20% of all UK applicants were offered places

*UNIQ 2016–18

'I realise it sounds kind of hyperbolic but this internship has genuinely been one of the best experiences of my life.'

Shian Harris

Moritz–Heyman expansion

Oxford offers a programme of enhanced support to UK-resident students from low-income backgrounds who are studying for their first undergraduate degree, thanks to a generous donation by Sir Michael Moritz and Ms Harriet Heyman in 2012. From an original contribution of £75 million, matched by £75 million from the University, the colleges and University are also working towards raising a further £150 million for other scholarships and outreach. Working towards this total has seen the University and colleges collaborating to achieve the milestone.

To date there have been 1,033 Moritz–Heyman scholars but this will increase significantly after an expansion this year. The scholarship has previously been available to students from a UK household earning £16,000 a year or less but will expand to cover every new student from a UK household earning £27,500 a year or less over the coming years. An extra 150 students are expected to benefit on average each year as a result, bringing the proportion of students receiving scholarships from 9% to 14% of Oxford's UK undergraduate body.

Moritz–Heyman scholars receive additional funding, opportunities to take part in volunteering activities, and additional support in undertaking internships thanks to dedicated support from the Internships Office.

Growing number of internships

In 2017–18, the University's Internship Office facilitated over 1,000 internships exclusively for Oxford students – including opportunities in over 35 countries and in a wide variety of job sectors. These included everything from one week micro-internships to 12-week placements, taking place during vacations between terms as well as over the summer holidays. The Internships Office aims to provide high-quality research and professional experiences through its partnerships with SMEs, start-ups, charities, multi-national firms, world-renowned research institutions and other companies. The experiences are often highly successful as well as life-changing: over one-quarter of the interns who participated in the Summer Internship Programme were offered further employment.

The demand for these internships remains high and in the last academic year the Micro-internship Programme alone saw a 40% increase in applications from the previous year. The Internship Office is aiming to reach 3,000 exclusive internships by 2023 for students at all levels of undergraduate and postgraduate study.

CASE STUDY

Shian Harris, Moritz–Heyman scholar, PPE, St Catherine's College

Shian completed an eight-week internship in Musanda, West Kenya, with the Nasio Trust, a charity supporting vulnerable children in Musanda and Mumias. The project involved researching the viability of setting up a social enterprise which makes shoes from tyres and second-hand denim as a means of avoiding jiggers, a flea that burrows into the feet (particularly of children) and expands, causing pain, debilitation and possible secondary infection such as tetanus. He told us:

'I realise it sounds kind of hyperbolic but this internship has genuinely been one of the best experiences of my life. The opportunity to work closely with some of the most committed and impressive people you're likely to meet and head a project with an international charity is something I never thought I'd be able to do as an undergraduate.

'I think one challenge a lot of us from lower-income backgrounds face is a lack of self-confidence. We often feel like we're not good enough to go for certain opportunities that better-off students have the instilled self-belief that they can get and succeed at. I personally felt highly uncertain and under-qualified for my internship and was worried I'd fail and drag down the charity. In these situations it's a lot easier to disengage but I think the Careers staff and particularly the Moritz–Heyman staff are great at supporting students with these concerns and actually making them feel they are worthy for the opportunities in front of them. I'd definitely recommend taking up the economic freedom to explore whatever career path and part of the world that you are most interested in.'

Photo: John Cairns/University of Oxford

Commitment to postgraduates

Oxford's postgraduate students are a diverse and growing community. There are now as many postgraduate students as undergraduates at Oxford, and 55% of postgraduates come from outside the UK. Postgraduates help to create dynamic and diverse educational experiences, and are critical factors in the University's impact in research and global reach. The University is focused on giving postgraduates the best possible educational experience and supporting them in their research. While undergraduate numbers have remained largely steady, in the last decade the number of postgraduates at Oxford has increased by 54%.

Oxford's ambitions when it comes to attracting and supporting postgraduate students have led to the launch of a new initiative designed to enable innovation in course design and delivery, particularly focusing on interdisciplinary study and addressing global challenges. The initiative has produced a number of new courses launched this year.

An MSc in Social Data Science will train students in a growing field which analyses large-scale and messy data about real-world behaviour (generated from social media, mobile phones and other sources). Developing the expertise to analyse this data will help students answer questions around economic and political behaviour, international mobility and ethics that are of interest in the social sciences and beyond academia.

Meanwhile, a new MSc in Energy Systems combines the expertise from the Departments of Physics, Materials Science and Chemistry and the School of Geography and the Environment.

The University has committed to supporting students on these new courses and others with the addition of a new postgraduate college – the first entirely new college since Kellogg College was established in 1990.

The University continues to face a substantial scholarship funding gap for graduate students, in particular for masters' courses: more than half of postgraduates still need to find other financial support to enable them to take up their place at Oxford. Graduate funding therefore remains a strategic priority, and in the last year the collegiate University has enhanced its graduate scholarship provision, in particular through the Oxford Graduate Scholarships matched fund. Through the matched fund, £126 million has been secured for graduate awards, matched by £84m of University funds, creating an endowment of over £200 million which will fund graduate students in perpetuity – 576 students have already benefited from matched fund scholarships. Oxford will be able to offer 1,000 new fully funded scholarships for 2019 entry, including new computer science scholarships in collaboration with Google DeepMind and a collaborative bid for an AHRC Doctoral Training Partnership scheme funding humanities doctoral students.

Research and innovation

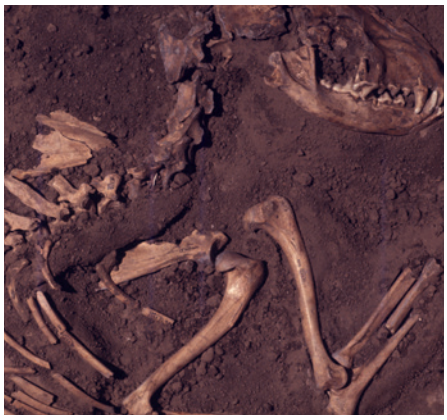
Ancient American dogs almost wiped out by European breeds

European settlers in the Americas all but wiped out the dogs that had lived alongside indigenous people for thousands of years.

Although factors like disease and cultural persecution wiped them out, one close relative of these native dogs lives on in an unexpected place – as a transmissible cancer whose genome is that of the original dog in which it appeared, but has since spread throughout the world.

Using genetic information from 71 archaeological dog remains from North America and Siberia, an international team led by researchers at Oxford's School of Archaeology compared ancient and modern American dog genomes and found that pre-contact **American dogs** had genetic signatures unlike those found anywhere else in the world.

Professor Greger Larson, Director of the Palaeo-BARN at Oxford, said: 'European colonists largely replaced indigenous people in the Americas and, amazingly, the same is true of their dogs.'



Trump supporters share more fake news than anyone else

Trump supporters and extreme far right conservatives share **more fake news** on social media than any other political group, according to Oxford University research.

Researchers at the Oxford Internet Institute (OII) analysed three months of social media activity of US Twitter and Facebook users from November 2017 to January 2018 – the period leading up to President Trump's State of the Union Address.

They found that, when it comes to sharing junk news, the political landscape is divided across ideological lines. Trump supporters share more junk news than other groups on Twitter, while on Facebook extreme hard right pages shared more junk news than all the other audience groups put together.

Professor Phil Howard, Director of the Computational Propaganda Project and Director of the Internet Institute, said: 'It appears that only one part of the political spectrum – the far right – is really the target for extremist, sensational and conspiratorial content. Over social media, moderates and centrists tend not to be as susceptible.'

Heatwave made 'twice as likely by climate change'

An Oxford report suggests that the unprecedented temperatures seen over summer 2018 were a sign of things to come – and a **direct result** of climate change.

Researchers from the Environmental Change Institute (ECI) at Oxford's School of Geography and Environment worked with the World Weather Attribution Network (WWA) to compare current temperatures with historical records at seven weather stations in northern Europe.

The findings show that the planet is definitely heating up and climate change more than doubled the likelihood of the European 'heatwave'. For some of the weather stations studied, current temperatures are unprecedented in the historical record.

Dr Friederike Otto, Deputy Director of the ECI, said: 'What was once regarded as unusually warm weather will become commonplace – in some cases, it already has. Society can and should prepare for this by restricting greenhouse gas emissions as sharply as possible.'

Photo: Dog: Del Baston, courtesy of the Center for American Archaeology ; MAGA hat: Gage Skidmore/Wikipedia Commons; Sunset: Pexels.com

£579.1 million

received in external research income in 2017–18

165

Oxford University Innovation has created more than 165 spinout companies. Over a third of these have been created in the past three years.

£2 billion

investment raised by Oxford spinout companies since 2011

21

spinout companies created in 2017–18

New speed record for trapped-ion 'building blocks' of quantum computers

Researchers at Oxford University set a new speed record last spring for the 'logic gates' that form the **building blocks of quantum computing**. It's a technology that could transform the way we process information. Quantum computers, which function according to the laws of quantum physics, have the potential to dwarf the processing power of today's classical computers. The Oxford team used a trapped-ion technique to develop its computer, in which logic gates place two charged atoms – containing information in the form of quantum bits, or qubits – in a state of quantum entanglement. Described by Einstein as 'spooky', entanglement is at the heart of quantum technology and means that the properties of the two atoms stay linked, even when they are separated by great distances.

The study was carried out by scientists from the Engineering and Physical Sciences Research Council-funded Networked Quantum Information Technologies Hub (NQIT), which is led by Oxford University. NQIT is the largest of the four hubs in the UK National Quantum Technology Programme, a £270 million investment by the UK government to establish a quantum technology industry in the UK. It is working towards building a quantum computer demonstrator, the Q20:20 engine.

Recycling waste to tackle the plastic crisis

Oxford Sustainable Fuels (OSF) launched in spring 2018 to tackle the **plastic crisis** by recycling waste into fuels. Spun out by Oxford University Innovation, OSF was founded on technology that turns waste from plastic, tyres and biomass into high-quality transportation fuels and chemicals. The company utilises pyrolysis, a technology that thermally decomposes plastics in the absence of oxygen and transforms them into an oil-like substance known as pyrolysis oil.

Dr Tiancun Xiao, Professor Peter Edwards and Dr Zhaoxi Zhang from Oxford's Department of Chemistry, whose work underpins OSF, have pioneered highly efficient methods to purify and upgrade pyrolysis oil to gasoline, diesel and jet fuels. OSF capitalises on this technology by improving the commercial viability of pyrolysis as a waste management method.

Significantly for the fight against pollution, the OSF process is able to handle mixed plastics and negates the need for sorting and separation, and will be complementary to current recycling methods in the effort to eliminate waste. The company has raised £1 million in seed funding from the investment arm of GEM, a Shenzhen-based waste recycling firm. The company plans to have begun deploying its technology against plastic waste within five years.

British birds adapt their beaks to birdfeeders

Scientists at Oxford identified that British birds have **adapted their beaks** to birdfeeders. A team of researchers, including members of Oxford's Department of Zoology, found that certain British birds have evolved longer beaks than other species, and suggested that the British fondness for feeding them may be the reason why. Using genetic and historical data, the research team found that the differences in beak length had occurred within a relatively short timeframe. This led them to speculate that there may be a link with the relatively recent practice of putting out food for garden birds. The team screened DNA from more than 3,000 birds to search for genetic differences between the British and the Dutch populations. These differences indicate where natural selection might be at work.

Researchers at Oxford University have been studying the Wytham Woods great tit population in Oxfordshire for 75 years and so the team had access to a wealth of historical data which clearly showed that the British great tits' beaks were getting longer over time. They were also able to access data from electronic tags fitted to some of the Wytham Woods birds, which enabled them to track how much time was spent at automated bird feeders.

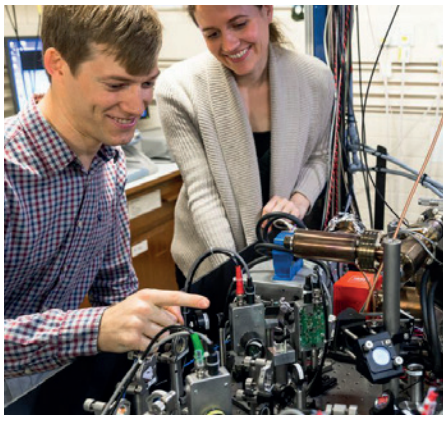


Photo: Students: oxfordsparks; Illustration: Oxford Sustainable Fuels; Bird: Pexels Pixabay.com

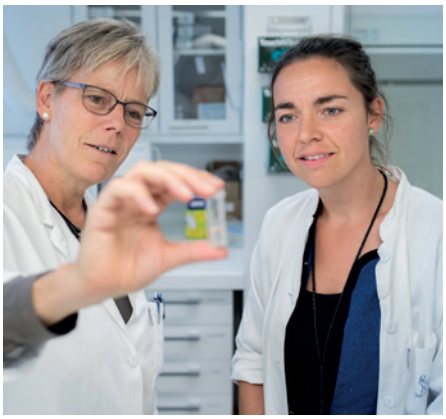
Vaccine spinout secures £20m in funding

Vaccitech, an Oxford University spinout company developing a **universal flu vaccine**, among other vaccine-related products, has secured £20 million ($27.1 million) in Series A financing. The round was co-led by new investors GV and Sequoia China, and existing backer Oxford Sciences Innovation, which manages a £600 million fund aimed at Oxford University spinouts. Neptune Ventures joined in participation. In total, Vaccitech has now raised £30 million since inception in 2016.

Vaccitech is currently a clinical stage company, with six total products that are based on inducing cellular immune responses using non-replicating viral vectors for treatment or prophylaxis against diseases at various stages. The CD8+ T-cell responses induced by the proprietary platform are among the highest reported in any human trials. The company, spun out by Oxford University Innovation in 2016, is commercialising the research of vaccine development specialists Adrian Hill and Sarah Gilbert, who developed the underpinning technology at Oxford University's Jenner Institute.

Novo Nordisk Research Centre opens in Oxford

International research company Novo Nordisk announced a £115 million investment in a **new research centre** at the University earlier this year, as part of a new type 2 diabetes research collaboration with the University. The partnership will enable scientists from Novo Nordisk and the University of Oxford to collaborate to discover innovative approaches for treating type 2 diabetes. The Novo Nordisk Research Centre Oxford will employ up to 100 Novo Nordisk researchers, based in the new Innovation Building on the Old Road Campus. The centre will focus on innovation within early-stage research that has potential to substantially impact future treatment of type 2 diabetes and its complications.



First human test of robotic eye surgery a success

Oxford researchers completed the first **successful trial** of robot-assisted retinal surgery. The trial, supported by the NIHR Oxford Biomedical Research Centre, took place at Oxford's John Radcliffe Hospital and involved 12 patients. Half were randomly allocated robot-assisted surgery and the other half to standard manual surgery to remove a membrane from the back of the eye. Using the robot, the surgeon was able to perform the procedure with equal or better efficacy than in the traditional manual approach. All experienced an improvement in their vision as a result. Professor Robert MacLaren, Professor of Ophthalmology at the University of Oxford, said: 'This is a huge leap forward for delicate and technically difficult surgery, which in time should significantly improve the quality and safety of this kind of operation.'

Photo: John Cairns/University of Oxford

AI technology can predict fatal heart attacks

A new technology has been developed that uses computed tomography (CT) coronary angiograms to flag **patients at risk** of deadly heart attacks years before they occur. Heart attacks are usually caused by inflamed plaques in the coronary artery causing an abrupt blockage of blood getting to the heart. Researchers at the University of Oxford, working with colleagues in Erlangen and at the Cleveland Clinic, have shown that the most dangerous plaques release chemical messengers which modify the surrounding fat. They developed a technology that detects the inflamed plaques that are prone to cause heart attacks by analysing CT images of the fat surrounding the arteries. The study involved 3,900 patients from Europe and the United States, who were followed up for ten years after they had a CT coronary angiogram. The FAI technology was found to predict fatal heart attacks many years before they happen.

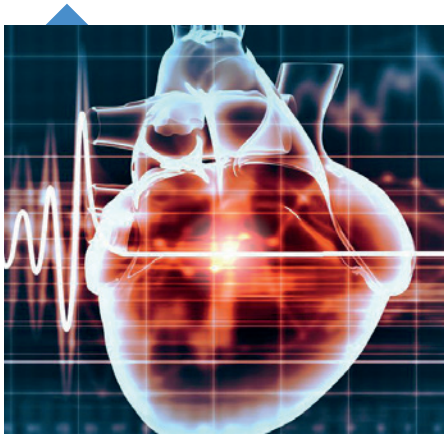


Photo: Shutterstock

Funding announced for almost 400 new doctoral places in arts and humanities

Oxford University, the Open University and the University of Cambridge **announced** the success of their bid for funding for the Open–Oxford–Cambridge Arts and Humanities Research Council Doctoral Training Partnership (DTP). The DTP is underpinned by world-class research and training environments, supported by integrated strategic partnerships with the BBC World Service, the National Trust and British Telecom; is national and international in mindset; and is determined to take a leading role in shaping the future of doctoral training in the UK. The Open–Oxford–Cambridge DTP will support five cohorts of students, starting in October 2019. The fifth and final cohort will start in 2023. Each year the consortium expects to award around 77 scholarships.

Traditional gender roles don't apply when it comes to spousal caregiving

Men are just as responsive to their spouse's illness as women, according to research published in Journals of Gerontology, Series B. **The study** is good news for increasingly stretched adult care services, which are more reliant on patients' families and spouses for support in the context of reduced funding. Conducted with colleagues from the University of Pennsylvania, the research sits in contrast to previous studies, which found that women tend to be more devoted. Using data from the German Socio-Economic Panel Study, the team focused on 538 applicable couples in Germany. The findings show that men increased their care hours as much as women did, resulting in similar levels of care once their partner became ill. Dr Laura Langner, Research Fellow at Nuffield College, Oxford, said: 'Our findings suggest that women won't have to worry that their partners are not up to the job of caring for them, should they need to.'

Feeling the beat through the elephant's feet

Oxford University scientists, in collaboration with Save the Elephants, demonstrated that elephant behaviour can be determined through the vibrations they create. The study offers a way to detect elephants without having them in sight and has the potential to provide real-time information on elephant distress and poaching threats in remote locations. To capture the information, the researchers used small sensors called 'geophones' to measure the ground-based **vibrations** generated by elephants in Kenya's Samburu National Reserve. They relied on the application of cutting-edge seismological techniques, commonly used to study earthquakes and dynamic processes inside Earth.

Computer models developed in this research indicate that these vibrations are detectable beyond what is audible, suggesting that elephants can use ground-transmitted information to know the whereabouts of the rest of the herd, even over several kilometres, depending on terrain type. Scientists and conservationists are increasingly worried about the effects of noise caused by humans, and this study revealed that, if we preserve wild landscapes, elephants can continue to detect the signal above the noise.

Photo: Robbie Labanowski

History project brings research into the classroom

When a new option for GCSE students, 'Migration, Empire and the Peoples', was launched, Professor Miles Larmer of Oxford's Faculty of History saw an opportunity to extend the department's work into schools. A workshop for Oxford researchers and school teachers developed a new set of **resources** to be used in a classroom setting. The teachers explained to the academics how they deliver complex historical concepts, methods and debates to 15- and 16-year-olds, while the academics contributed their research expertise. The project has provided an opportunity to share the faculty's research outside traditional circles – particularly in state schools that have sent very few or no students to Oxford. It is hoped that the project will encourage undergraduate applications from students who have taken the new course, and demonstrate the faculty's commitment to engaging with this area of history teaching.

AI, citizen science and disaster response combine to help victims of Hurricane Irma

A highly unusual **collaboration** between information engineers at Oxford, the Zooniverse citizen science platform and international disaster response organisation Rescue Global enabled a rapid and effective response to Hurricane Irma. The project drew on the people-powered research platform Zooniverse to work with volunteers and crowdsource data needed to understand Irma's path of destruction and damage caused. Thousands of volunteers joined the effort to analyse before-and-after satellite images of the islands hit by Irma and identify features such as damaged buildings, flooding, blocked roads or new temporary settlements which indicate that people are homeless.

A suite of sophisticated artificial intelligence tools, developed by Oxford engineering researchers, was then able to process the resulting data. This analysis enabled the team to build impact 'heat maps' that identified areas in need of urgent assistance, helping Rescue Global to decide where to send its own small reconnaissance planes to conduct detailed aerial assessments, and to share critical information with a multitude of governmental and humanitarian partners.

Rosalind Franklin Institute to 'transform' life sciences research

The **new Rosalind Franklin Institute** (RFI), a national £103 million centre of excellence, will harness disruptive technologies such as AI and robotics to dramatically improve our understanding of biology. Oxford will be one of ten partner universities working alongside the Science and Technology Facilities Council to deliver the research, which will tackle many of the key challenges in the health and life sciences. Among the initial projects funded is the creation of the world's most advanced ultra-fast video camera, which will help researchers develop techniques that use sound and light to detect and treat diseases including some of the most lethal forms of cancer. Led by Professor Eleanor Stride from Oxford's Institute of Biomedical Engineering, the project is exploring targeted ways of treating cancer that can avoid the side effects of traditional treatments such as chemotherapy.

I was here... in ancient Egypt

Names, dates, bad jokes, life advice: we find graffiti almost everywhere in modern life, but not many people realise that scrawling on walls isn't anything new. At least 3,000 years ago, in the dusty heat of ancient Egyptian temples, people did the very same thing. Dr Elizabeth Frood, Associate Professor of Egyptology at Oxford, has been meticulously uncovering examples of such graffiti at the 4,000-year-old Temple of Karnak, giving an unusual peek into the daily life of an ancient society.

Nestled alongside official images of the gods are the names and drawings of ordinary people. Some are carved into sandstone, while others have been carefully inked and painted. 'People write their names and titles – sort of like "**I was here**"', explains Dr Frood. 'A lot of the graffiti is by temple staff. In one stairwell, we have a baker's name and image – I imagine him as someone who made delicious cakes for the gods.'

Photo: Jane Wynyard/University of Oxford

People

'Our people are the bedrock of our success, without them, without you, we will never be able to achieve our mission of advancing learning by research and teaching and improving the world around us locally, nationally and internationally.'

Professor Louise Richardson during her 2018 Oration

'This award is a first for the University and a milestone of our progress on the journey towards creating a racially inclusive institution. We know there is still a lot of work to do, but the structures we have now put in place leave us in a great position to address the main obstacles to racial equality at Oxford. The hard work starts now.'

Dr Rebecca Surender, Pro Vice-Chancellor and University Advocate for Equality and Diversity

Race Equality Charter

This year Oxford became one of only 10 UK universities to receive a **Race Equality Charter bronze award** from Advance HE. This recognises the University's efforts and commitment to improve the representation, progression and success of minority ethnic staff and students. In the process, the University has investigated the main issues relating to equality and diversity, such as the diversity of appointments to senior staff positions.

Mindful Employer Charter

Oxford has signed up to the **Mindful Employer Charter** which commits to securing an open and supportive culture where staff feel confident to disclose mental health issues. The University's Counselling Service continues to expand and provide high-quality counselling for more students. A new Sexual Harassment and Violence Support Service was also launched in 2018. It employs specialist advisors who offer free support and advice to students, whether their experiences of sexual harassment or violence happened in Oxford or elsewhere.

The Vice-Chancellor's Diversity Awards

Dr Clara Barker won the 'individual champion' award at the **Vice-Chancellor's Diversity Awards**. An openly trans woman, Dr Barker plays an active role in promoting LGBT+ and trans issues across the University and beyond. She is vice-chair of the University's LGBT+ Advisory Group, acts as a role model for local LGBT+ youth, and supports their parents and works with schools to tackle bullying. Her work has been recognised through several national awards, including the Points of Light award by the Prime Minister's Office.

Thaís Roque was the winner in the student category. She launched the Oxford Students Refugee Campaign, which has won pledges of more than £240,000 for scholarships for students whose studies have been disrupted because of war or persecution. Thaís and her campaign address the whole student journey, supporting the often missed elements of at-risk student need, such as application fees and flights to the UK.

'I am doing what I can to show that trans-people are more than just a discussion about bathroom use or the punchline of a joke. We are scientists, writers, musicians, engineers. We are people. And I can do this, all because of the support I have been given by my department and the University.'

Dr Clara Barker

Brexit

Brexit poses significant challenges to the University, not least because one in four researchers and one in six students comes from the EU. The University is responding through various channels. It has been actively lobbying government bodies and politicians over visas and the right to remain for our EU staff. It has committed to paying the settlement fees of all EU employees and their families wanting to stay in the UK after Brexit.

The **Oxford–Berlin Research Partnership** between Oxford University and four of Germany's leading universities gives the University a physical and legal base in Europe and furthers its collaboration with European researchers. Oxford's Migration Observatory provides expert analysis of the latest migration statistics for journalists and politicians. Whatever Brexit scenario we are met with in 2019, Oxford University will be prepared.

Housing

Oxford is the city with the largest gap between average incomes and average house prices in the UK, so it is important the University houses as many of its students and staff as possible. The **Strategic Plan** commits to starting the construction of at least 1,000 new subsidised homes for University and college staff, and 1,000 additional graduate rooms, by 2023. This will include the establishment of at least one new graduate college.

Strategic Plan commitment

We will have started the construction of at least 1,000 new subsidised homes for University and college staff by 2023.

Photo: Ian Clark/Flickr

Engagement and partnership

Community grants

The University gives out £50,000 per year in grants to help some of the many **community activities** which take place across the city.

A recent recipient was Windale Primary School in Blackbird Leys, Oxford, who will put £2,400 towards their innovative approach to nurturing a lifelong love of learning. The school is using the funds to expand and develop its library, and encourage children to read.

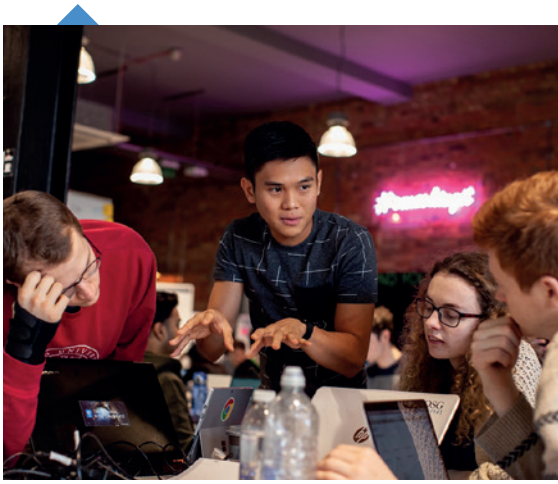
The community grants scheme has supported Oxford Open Doors, which encourages local residents to visit the University and colleges and meet students and academics.

Grants have also gone to local charity Homeless Oxford, a holiday camp for people with disabilities, and the city's annual Christmas Lights Festival.

Foundry

The Foundry, which is a hub for student entrepreneurship, opened in 2018 with a speech from Apple's CEO Tim Cook. Ana Bakshi, the Foundry's Director, explains how it will benefit Oxford students from all academic divisions:

'At its core, the Foundry is about creating a diverse, student-led community where innovation and creativity lives and breathes, and it's about delivering high-quality hands-on learning for all our students. The Foundry will inspire students to think more entrepreneurially, to find like-minded people, to build confidence and overcome fear of failure as we all create solutions to big problems. It will be as much for the student who wants to become an employee as it is for the student who wants to set up their own venture. The Foundry is about people, finding your tribe and unleashing your best you. We want to support students to "smash it" and achieve success. Success means different things to different people and we want to help give students the practical skills they need to support their respective futures.'



Oxford University and National Trust announce research partnership

A new **partnership** will connect cutting-edge Oxford University research with the National Trust's inspiring places and collections. Marking the first investment of this kind by the National Trust in a university, the partnership will create new opportunities for interdisciplinary research, knowledge exchange, public engagement and training between the two organisations. The venture has grown out of the Trusted Source Knowledge Transfer Partnership, which ran 2016–18 and was funded by the National Trust, the Arts and Humanities Research Council and InnovateUK. Trusted Source provided a means to bring academic research into the National Trust's interpretation, drawing on experts to create materials that enhance visitor engagement with the properties, landscapes and collections in the charity's care and supporting its ambition to move, teach and inspire its visitors and supporters.

The Tinbergen Building

The Tinbergen Building had to be closed in early 2017 after asbestos was discovered. Now the University has decided to **redevelop** the site and create a new world-class centre for the pursuit of life and mind sciences. The site will house the Departments of Experimental Psychology, Plant Sciences and Zoology, providing research and teaching laboratories, lecture theatres, administrative accommodation, specialised support laboratories and spaces for public engagement.

Osney Mead

Plans for the **transformation** of the Osney Mead industrial estate will accelerate in 2019. The estate is a largely under-utilised 44-acre site just west of the city centre off Botley Road. The University, along with other stakeholders, has developed a vision for the site to unlock its potential and bring economic benefits to the region. It will become a vibrant innovation quarter which increases opportunities for employment and homes, and bring better pedestrian and cycle connections to surrounding areas. The aim is to make Osney Mead a pleasant waterside place, with new publicly accessible outdoor spaces, improved landscapes and reduced risk of flooding.

New graduate college

Last year the University **announced** that it would open a new college – the first college since Kellogg was founded in 1990. It is proposed that the college will start recruiting 200 graduate students in 2019–20 for admission in September 2020. It is anticipated that a majority of students will be drawn from departments across the Mathematical, Physical and Life Sciences Division – but other disciplines will also be represented. Interaction between the disciplines will be aided by recruitment of post-doctoral researchers and graduate students working on two major challenges – Artificial Intelligence (AI) and Machine Learning, and Environmental Change. One essential attribute of the proposed college is yet to be considered – its name.

Photo: Oxford Foundry

Development and Alumni

Thanks to the generosity of alumni and friends, the University of Oxford is able to deliver world-class teaching and undertake pioneering research that benefits people and communities across the world. Here are a few examples from 2017/18 of how donor support is helping to make a real and lasting impact.

Foundations for new physics

Research into areas such as quantum science and technology and the fundamental laws of nature, as well as atomic level experiments to develop quantum computers, received a major boost this year, following the completion of the new £50 million Beecroft Building in the Department of Physics. Alumni and friends from around the world donated over £10 million towards it, including a major benefaction from alumnus Adrian Beecroft, after whom the building is named. The Wolfson Foundation also granted £1.9 million to support the Wolfson Centre for Quantum Technology, which is located in the new building.

Effectively a ten-storey building, with only five storeys above ground level, the Beecroft Building boasts the deepest basement in Oxford at 16 metres. The below-ground accommodation houses high-specification laboratories suitable for carrying out extremely environmentally sensitive research. These stable conditions enable the extraordinary precision required for atomic-level experiments.

The anti-vibration performance and temperature control of the laboratories in the Beecroft Building are among the very best globally: the Engineering and Physical Sciences Research Council (EPSRC) granted £3.2 million to Oxford in support of the Beecroft Building, in the knowledge that the new high-specification laboratories would enable research beyond the capabilities of most other facilities. Oxford is now the UK's largest and most diverse centre for quantum research and forms part of the Networked Quantum Information Technologies (NQIT) Hub. The hub is part of the government's £270 million investment to establish a quantum technology industry in the UK.

Support for the study of German

European supermarket chain Lidl has made a gift in support of students studying German at Oxford. Their donation will enable the creation of five annual graduate scholarships, as well as a fund to support undergraduate students embarking on their year abroad. Lidl's generosity will also lead to the establishment of an annual undergraduate competition.

Beginning in the 2018/19 academic year, one scholarship will be awarded annually to students wishing to pursue a German-based Master's in Modern Languages. Lidl's commitment will provide financial support to individuals demonstrating exceptional academic merit, but who may be prevented from taking up the course due to their financial circumstances.

Lidl's gift will also enable the creation of an annual fund for undergraduate students who need additional financial support for their year abroad. By relieving the financial commitment this entails, the fund will enable students to engage fully in an academic, cultural and social capacity during their stay in Germany.

Professor Ian Watson, Faculty Board Chair for the Faculty of Medieval and Modern Languages and Dr Charlie Louth, Chair of the German Sub-Faculty, said: 'We are delighted that, at a time when the teaching of modern languages in the UK is facing considerable challenges, a major German company in the shape of Lidl has stepped forward to offer its support.'

Tackling prostate cancer

In the Medical Sciences Division, donations are helping to drive cutting-edge research into some of the world's most significant health challenges. Professor Ian Mills's work to better understand the biology of prostate cancer is a prime example of this.

As the John Black Associate Professor of Prostate Cancer, Professor Mills's research focuses on using targeted drugs to modify the inflammatory and immune response of the patient to the cancer. He does this by developing preclinical models that, in turn, enable a better understanding of the way in which these drugs apply to cancer cells, and how they interplay with a functioning immune system.

Professor Mills (pictured left) is currently in the process of developing models of the disease that can be used by a number of different groups at the University, including teams based within his own department, the Nuffield Department of Surgical Sciences, as well as further afield.

'Not only does philanthropy give me the opportunity to catalyse collaborations, but it also allows me to take leads, targets and candidate biomarkers that we've discovered and conduct more experiments,' he explained. 'I don't have to slow down the pace of my work by filing grant applications. I can just keep pushing until the data shows us what's going to work.'

Advancing human rights research

Officially opened by the late Kofi Annan in June 2018, the Bonavero Institute of Human Rights was established with a mission of engaging in research on some of the world's most pressing issues.

Part of the Faculty of Law at Oxford, the institute is situated in a new building at Mansfield College. It is named after one of its principle donors, the Bonavero family, who founded the AB Charitable Trust to defend and promote the cause of human dignity. The generous donation provided by the trust is supporting the endowment of core posts within the institute.

In addition to tackling a range of human rights issues, the institute is nurturing a vibrant community of graduate students, hosting scholars of law and other disciplines, and collaborating with practitioners of human rights around the world.

Professor Kate O'Regan, Director of the Bonavero Institute, said: 'The establishment of an institute dedicated to human rights research at the University of Oxford is both timely and auspicious, not least because our world is made and shaped by human beings and sustaining human rights is critical for the future.'

Dr Hilary Ketchum examining the skull of the long-necked plesiosaur.

Photo: John Cairns/University of Oxford

Out of the deep

The fossilised remains of two large Jurassic marine reptiles have gone on display as part of a new permanent exhibit at the Oxford University Museum of Natural History. One of these is the rare long-necked plesiosaur that was discovered in a quarry in Cambridgeshire in 2014, and later given to the museum by the quarry's owners, Forterra.

'We received an overwhelming amount of public interest when the long-necked plesiosaur was donated,' says Collections Manager Dr Hilary Ketchum (pictured above). 'We had a lot of people asking us to put it on display, but we didn't have a showcase that was big enough, or the money to get one.'

Thankfully, generous philanthropic support from the DCMS/Wolfson Museums and Galleries Improvement Fund and WREN's FCC Community Action Fund meant that the museum was able to purchase the specialist cases it needed, as well as commission a range of new digital content and dynamic artwork for the exhibit.

'The really exciting thing is that we think they might be new species,' says Dr Ketchum. 'The long-necked plesiosaur has one of the most complete skulls ever found, so that's going to tell us a lot. We need to scan parts of the skeleton still preserved in rock, and who knows what that analysis will reveal? I can't wait to find out.'

Alumni

The start of any new academic year is always a milestone for the Alumni Relations Office as it typically presents its flagship event, the Alumni Weekend, in September.

In 2018 the University welcomed back nearly 1,500 alumni and guests for the 3-day event, showcasing over 100 activities including academic lectures, hands-on workshops, concerts, tours and a range of family-friendly programmes.

In addition to a robust schedule of international events for alumni (Japan and North America were the focus for spring 2019), the Alumni Office aligns its work with that of the University's Strategic Plan, using all its channels to inform, empower and mobilise alumni in support of the University, with a particular focus on access and outreach and support for the student experience through internships and mentoring.

Photo: John Cairns/University of Oxford

Chancellor's Court of Benefactors

The following people were admitted to the Chancellor's Court of Benefactors at a special ceremony in Convocation House in 2018. The Court, which has more than 250 members and includes 26 fellows, celebrates and recognises those friends and supporters who have been outstandingly generous towards the University and the colleges.

New Fellows

HRH Sultan Dr Nazrin Shah

The British Foundation for the Study of Azerbaijan and the Caucasus, represented by Professor Nargiz Pashayeva

Heritage Lottery Fund, represented by Sir Peter Luff

Sir Martin Smith and Lady Smith, OBE

New Members

Mr Mohamed Amersi

Dame Pamela Banks

Mr Duncan Greenland, CBE, and Mrs Barbara Greenland

Mr Bruns H Grayson

Mr James Mellon

Mr David Norwood

The Rotary Foundation, represented by Mr Michael Webb

Mr Bjorn Saven

Mr Julian Schild

Clarendon Arch

Coinciding with the Chancellor's Court of Benefactors annual ceremony, an unveiling celebration was held for the donors whose names have recently been engraved on the slate tablets under the Clarendon Arch, near to the Bodleian Library. The Clarendon Arch records the names of some of the University's most prominent benefactors, dating all the way back to Henry VIII and Sir Thomas Bodley. In 2018, the University added an unprecedented 22 names.


QATAR FOUNDATION
SIR KA-SHING LI
JULIAN H ROBERTSON
GARETH ROBERTS
THE LEVENTIS FAMILY
SULTAN NAZRIN SHAH OF
HEATHER BARBARA ALLEN
THE ATLANTIC PHILANTHROPIES
ANDRÉ HOFFMANN
ANDREW & DAME PAMELA BANKS
CHRISTOPHER GRADEL
SIR MARTIN AND LADY SMITH AND FAMILY
THE PERRODO FAMILY
THE BRITISH FOUNDATION FOR THE
STUDY OF AZERBAIJAN AND THE CAUCASUS
STEPHEN AND CAROLINE BUTT
THE EXXONMOBIL FOUNDATION
ADRIAN BEECROFT
GUY AND JULIA HANDS
HERITAGE LOTTERY FUND
INVESTCORP
ALEX BEARD
THE PERSHING SQUARE FOUNDATION
THOMSON REUTERS FOUNDATION
JOHN MOUSSOURIS AND JESSICA VALDESPINO
BARRIE AND DEEDEE WIGMORE

Finance

'It is our responsibility to ensure that we use the opportunities accorded us by this bond to pass on to our successors an even stronger university.'

Professor Louise Richardson

Photo: London Stock Exchange

ABOVE: The Vice-Chancellor joins the London Stock Exchange for the market open ceremony.

Bond

Oxford made a confident commitment to its future with a bond issue which raised £750 million for new physical and virtual infrastructure development. The money will be invested in strategic capital projects which will benefit the University for decades to come. The bond represented a statement of confidence from investors in the University – it was significantly oversubscribed with investors offering £3.6 billion. A Reuters report called it 'good news for Britain's top academic institutions at a time of anxiety over Brexit-related funding shortfalls and calls to scrap student tuition fees'.

£157 million

In 2017–18 £157 million was raised for the University and the colleges through the Oxford Thinking Campaign.

£2.89 billion has been raised since 2004 towards the campaign goal of £3 billion.*

*including cumulative college data to 31/01/18

Consolidated and University Statements of Comprehensive Income

For the year ended 31 July 2018

All activities relate to continuing operations.

	Consolidated		University	
	2017/18 incl Press £m	2016/17 excl Press £m	2017/18 incl Press £m	2016/17 excl Press £m
Income				
Tuition fees and education contracts	332.5	307.2	319.3	295.3
Funding body grants	186.9	194.6	186.9	194.6
Research grants and contracts	579.1	564.9	575.7	559.0
Publishing services	798.0	-	646.2	-
Other income	227.8	227.7	166.3	187.5
Investment income	18.3	14.4	18.8	14.3
Total income before donations	**2,142.6**	**1,308.8**	**1,913.2**	**1,250.7**
Donations and endowments	93.2	88.4	93.2	91.5
Donation of heritage assets	1.2	3.2	1.2	3.2
Total Income	**2,237.0**	**1,400.4**	**2,007.6**	**1,345.4**
Expenditure				
Staff costs	1,001.0	714.8	932.1	696.3
Staff costs – movement in pensions provision	(18.7)	(6.5)	(18.2)	(9.3)
Operating expenditure	1,024.0	576.2	908.9	530.9
Depreciation/amortisation	145.5	102.6	142.4	102.2
Interest and other finance costs	28.6	9.9	28.0	9.9
Total Expenditure	**2,180.4**	**1,397.0**	**1,993.2**	**1,330.0**
Surplus before other gains	**56.6**	**3.4**	**14.4**	**15.4**
Gains on investments	308.3	218.1	303.8	212.9
Share of surplus/(deficit) on Joint Ventures	1.3	(0.2)	2.5	-
Surplus before tax	**366.2**	**221.3**	**320.7**	**228.3**
Taxation	(11.3)	(1.6)	(1.9)	(1.3)
Minority Interest	(0.2)	-	-	-
Surplus after tax	**354.7**	**219.7**	**318.8**	**227.0**
Changes in defined benefit pension scheme liability	32.3	-	32.3	-
Currency translation differences on foreign currency net investments	(0.9)	-	2.0	-
Effective portion of changes in fair value of cash-flow hedges	3.8	-	3.8	-
Total Comprehensive Income	**389.9**	**219.7**	**356.9**	**227.0**
Represented by:				
Unrestricted comprehensive income for the year	214.7	129.8	183.3	139.7
Endowment comprehensive income for the year	171.2	79.6	169.6	77.0
Restricted comprehensive income for the year	4.0	10.3	4.0	10.3
	389.9	**219.7**	**356.9**	**227.0**

The figures for 2016/17 do not include the activities of the Oxford University Press.