

Annual Review 2018/19

5

#### Contents

- 1 Vice-Chancellor's foreword
- 2 Access and Admissions
- 5 Humanities: The Stephen A. Schwarzman Centre for the Humanities
- 6 Humanities
- 7 Alumni
- 9 Parks College
- **11** A new partnership for Oxford
- 12 Mathematical, Physical and Life Sciences
- 14 Medical Sciences
- 16 Social Sciences
- **18** Gardens, libraries and museums
- **20** Oxford in the Community
- 22 Development
- 24 Financial overview

This image Oxford Foundry – see page 20 Front cover Pitt Rivers Museum – see page 18

# Vice-Chancellor's foreword

2018-19 has been a banner year for the University of Oxford, as the following pages will attest.

Our achievements have been widely recognised. The University was ranked No 1 in the world for the fourth successive year by the Times Higher Education Global Rankings, while the Medical Sciences Division retained the top spot for the 8th consecutive year (9th at the time of printing). Two of our academics were awarded Nobel Prizes for research conducted here. Two others were appointed Chief Scientific Adviser to government departments; seven were elected to fellowship of the British Academy and five to fellowship of the Royal Society, to mention just a few of the many accolades received by our extraordinarily talented academics.

While the beautiful stately architecture of University buildings in central Oxford remains unchanged and the fundamentals of what takes place in these buildings remain unchanged: the commitment to personalised teaching, to pushing at the frontiers of knowledge, to using knowledge generated here for the betterment of society; yet our University is changing with the times, as it has always done.

This year we announced four initiatives which will have a profound and beneficial impact on the future development of the University.

We announced the creation of a new graduate college, Parks College. Parks will recruit students from all four Divisions and will focus on broad themes of critical importance to society: the environment, artificial intelligence and machine learning and cellular life. The first students will matriculate in Parks next year. The creation of Parks will allow our departments to grow and admit more graduate students without disrupting the powerful sense of community in our existing colleges.

We also made a commitment that in four years' time 25% of the British undergraduates we admit will be from low and moderate income families. In order to achieve this goal we have grown our flagship summer programme UNIQ to 1350 pupils and have launched two new programmes, Opportunity Oxford and Foundation Oxford.

Third, in June we announced the single biggest gift the University has received since the Renaissance: a gift of  $\pounds$ 150,000,000 from Stephen A Schwarzman that will enable us to realise our long held ambition to create a Centre for the Humanities. The Centre will not only bring our Humanities faculties together with a library for the 21st century it will also contain a centre for the study of AI Ethics to harness the insights of the Humanities to apply them to the technologies of the future. The Centre will also provide Oxford – the University and the city – with a much needed performing arts centre.

Finally, we announced a partnership with Legal & General who will invest up to  $\pounds 4$  billion in Oxford over the next ten years. They will build affordable housing for our students and staff and develop two science parks.

This year we also announced the conclusion of the Oxford Thinking campaign after it exceeded its  $\pounds 3$  billion target, thanks to the extraordinary generosity of our alumni and friends.

These achievements and many others are detailed in the pages that follow. I hope you enjoy reading about them.

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**Professor Louise Richardson** Vice-Chancellor



Professor Louise Richardson, Vice-Chancellor

## **Access and Admissions**

In 2018–19 the University launched a concerted effort to broaden access to Oxford, motivated by a commitment to equality of opportunity and a desire to recruit the best students, whatever their backgrounds

#### Oxford steps-up access commitment

May saw the University announce two new Oxford initiatives to help students from under-represented backgrounds. The two new programmes - Opportunity Oxford and Foundation Oxford - aim to increase significantly the number of most promising students from groups who are currently underrepresented in Oxford. Opportunity Oxford is aimed at students from more disadvantaged socioeconomic backgrounds. Foundation Oxford will be open to students who have personally experienced severe disadvantage or educational disruption.

When fully up and running, these major new programmes will offer transformative paths to outstanding education for up to 250 students from disadvantaged backgrounds a year, representing 10% of Oxford's UK undergraduate intake. This represents a significant step change for the University, which will boost the total proportion of students coming to Oxford from under-represented backgrounds from 15% of the current annual UK intake to 25%.

Last year also saw the expension of the UNIQ programme by 50%, creating an additional 500 places. The immersive one-week summer school has inspired nearly 1,400 students to make successful applications to Oxford since 2010. Those who participate in the programme have an above average chance of being offered a place to study at Oxford (34% compared to 22% for all UK applicants).

# Graduate student imperative

A pilot of a new summer school aimed at graduate students, UNIQ+, ran in July 2019 and will expand in 2020. UNIQ+ builds on the success of the recently expanded UNIQ residential programme for A-Level students in their final year of study. UNIQ+ is aimed at talented individuals who would find progressing into postgraduate study a challenge for reasons other than their academic ability, such as socio-economic circumstances.

The residential experience will run over six weeks, and will give 25 potential applicants the chance to experience what it is like to be a postgraduate research student at Oxford, with a focus on the medical, biological, mathematical and physical sciences.

All candidates receive a  $\pounds 2,500$  stipend to offset any loss of potential earnings during the programme.



Target Oxbridge, Trinity College, 2019



### Target Oxbridge is helping more BAME teens than ever to get into Oxford

The access programme Target Oxbridge has expanded, helping more Black, Asian and Minority Ethnic (BAME) students to choose Oxford than ever before. Of our 2019 UK intake, 22% (558 students) were BAME (up from 16% in 2016) and 3.2% (80 students) were black African/ Caribbean (up from 1.3% in 2016).

The changing intake at the University did not go unnoticed by participants in Target Oxbridge, with one commenting, 'I didn't think I would see anyone that looked like me, it's such a relief that I have.'

More than 70 talented black teenagers from across the country visited Oxford University for the first time in 2019 for the Target Oxbridge programme.

The free programme is a partnership

between diversity recruitment specialists Rare, and Oxford and Cambridge.

The immersive three-day experience organised by the University's Undergraduate Admissions and Outreach department is offered as part of a development programme, which is intended to provide Year 12 participants with the support and practical advice that they need to make competitive applications to Oxford or Cambridge University. Over the course of the year building up to their UCAS applications, participants receive regular one-to-one mentoring, residential opportunities and support with super-curricular engagement.

#### Target Oxbridge,

Trinity College, 2019

1.350 Number of prospective

on UNIQ in Oxford in 2019

1\_00

now offered to graduate students by Oxford

18%

and minority ethnic the overall proportion of that age group in England and Wales

#### **IN NUMBERS:**

admitted to the University

Female students as a admitted

25%

Figure committed to background student intake

**50**%

Oxford researchers study brain data. The Schwarzman Centre will be home to a new Institute for Ethics in Artificial Intelligence

ANNUAL REVIEW 2018/19 PAGES 4–5

2

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### **Humanities**

### The Stephen A. Schwarzman Centre for the Humanities

### The Stephen A. Schwarzman Centre for the Humanities has been made possible as the result of one of Oxford's largest ever gifts, £150 million

The new Centre will occupy a presently empty space on the Radcliffe Observatory Quarter, bounded by Woodstock Road, Little Clarendon Street, Walton Street and Observatory Street and situated just to the north of the city centre.

The Schwarzman Centre will give Oxford's humanities a home with state-of-the-art academic, exhibition and performance spaces, and a new humanities library.

The building, made possible by the landmark  $\pounds 150$  million gift from philanthropist and businessman Stephen A. Schwarzman, demonstrates the essential role of the Humanities in helping society confront and answer fundamental questions of the 21st century.

The Schwarzman Centre will be a dynamic hub dedicated to the Humanities, those fields which inform our understanding and appreciation of the human experience. For the first time in the University's history, eight Humanities faculties will be housed together with a new Humanities library in a space designed to encourage learning and experimentation.

The space will encourage Oxford's programmes in English, history, linguistics, philology and phonetics, medieval and modern languages, music, philosophy, and theology and religion to encourage experiential learning and bold experimentation through cross-disciplinary and collaborative study.

The Schwarzman Centre will also be home to Oxford's new Institute for Ethics in AI which will build upon the University's world-class capabilities in the Humanities to lead the study of the ethical implications of artificial intelligence and other new computing technologies.

The building will include performing arts and exhibition venues designed to engage the Oxford community and the public at large. Modern amenities and digital capabilities will allow Oxford to share the full breadth of its unparalleled collections and research in the Humanities.



Stephen A. Schwarzman



Radcliffe Observatory Quarter, 2019 – site for the forthcoming Schwarzman Centre

### **Humanities**

Studying Humanities at Oxford has expanded and transformed in ways that would have seemed unfamiliar even a few years ago, as these reports demonstrate

Late Antique and Byzantine studies at Oxford boosted by major gift from Stavros Niarchos Foundation

From left to right: Dr Ine Jacobs, Prof Peter Frankopan, Prof Karen O'Brien and Prof Dame Averil Cameron



May heralded a major gift of  $\pounds 3$  million from the Stavros Niarchos Foundation (SNF) to support Late Antique and Byzantine studies at Oxford.

The funding endows the prestigious Stavros Niarchos Foundation Bywater and Sotheby Professorship of Byzantine and Modern Greek Language and Literature and a Stavros Niarchos Foundation Associate Professorship of Byzantine Archaeology and Visual Culture. SNF is also funding the post of the Stavros Niarchos Foundation Director of the Oxford Centre for Byzantine Research (OCBR), along with an Administrator for the next two years.

This generosity will enhance the OCBR as a global centre of excellence in Late Antique, Byzantine, and post-Byzantine studies, facilitating international engagement with research and teaching institutions and outreach to the wider public.

Oxford is a world leader in the field of Late Antique and Byzantine studies, which incorporates a range of disciplines, from history and archaeology to languages and theology. The concentration of Byzantine scholars at the University is no accident: the Bodleian Library and Ashmolean Museum house remarkable resources, including many relating to the Byzantine Empire, while Oxford's excellence in the humanities provides a stimulating cross-disciplinary environment.

### Oxford supports Afghan Women in Music

Ensemble Zohra, the first all-female orchestra in Afghanistan, came to Oxford for a week of residency at Somerville College in March, performing in the Sheldonian Theatre on March 17th.

The visit was envisaged as the beginning of an exciting and enduring relationship between the Afghanistan National Institute of Music and the city of Oxford.

It has been extremely difficult to pursue musical activities in Afghanistan since 1979, and notwithstanding limited changes since 2001, there are still large portions of the Afghan population that do not approve of music-making, particularly by women.



# Alumni

Meeting Minds Oxford in September 2018, the signature event of the Alumni Relations Office, boasted more than 100 events over three days showcasing the University's excellence in research spanning all the Divisions and behind the scenes tours of its most iconic spaces. The Weekend drew an enthusiastic audience of 1,315 alumni and guests from every corner of the world. The occasion also provided the backdrop for presenting the 2018 Distinguished Friend of Oxford Awards to Lorna Carter OBE, Christopher Mack and Howard Rosen.





Top: Meeting Minds Oxford. Bottom and right: Meeting Minds Tokyo

Meeting Minds Tokyo in March 2019, the University's third Alumni Weekend in Asia, drew an audience of 529 alumni and guests from across the region for a weekend featuring a wide range of talks on everything from robotics in healthcare to the impact of Christianity on Tokugawa Japan to a candid discussion with the Governor of the Bank of Japan.





# Parks College

### A new graduate college at the University of Oxford, with a focus on 21st century interdisciplinary research

Parks College was officially established on 7th May 2019 as a graduate society at the University of Oxford, similar to Kellogg College and St Cross College. It is the first new college since Kellogg in 1990 and will welcome its first students in October 2021.

Known provisionally as Parks College in reference to its location on Parks Road, in the heart of the University Science Area, the college will share its building with the historic Radcliffe Science Library and a new Museums Collections Teaching and Research Centre.

The building is currently undergoing an extensive programme of refurbishment, which will create exceptional new spaces and facilities for teaching, study, research, public engagement and social interactions.

Parks College will be a vibrant research and social community that draws together researchers from different disciplines to explore some of the big questions of our time.

Drawing on expertise from all four Divisions of the University, the college will address three central areas of knowledge in the 21st century:

Artificial Intelligence and Machine Learning – addressing problems of global significance from billions of data streams, people and sensors; which will involve not only computer scientists, engineers, mathematicians and statisticians, working on fundamental principles or applications of AI, but also neuroscientists and biologists interested in characterising human intelligence, philosophers working in philosophy of mind and social scientists exploring ethical issues.

- Environmental Change addressing the drivers, impacts of, and responses to, environmental change. This theme covers research ranging from the institutional, social and behavioural drivers of biodiversity loss and climate change; earth system changes (physical, biological and social); and responses to these changes (including human relationships with their environment).
- Cellular Life involving research that seeks to understand the underlying mechanisms of living organisms, with an emphasis on the cell; and including approaches that look at processes, causes, cures, and impacts from social, economic, historical, or biological perspectives.

Much 21st-century research is interdisciplinary, and some of the most exciting research takes place at the boundary between two or more disciplines. This new college will provide the space, facilities and resources to actively promote interaction and exchange both among Oxford researchers and with the wider public, including industry, government and other organisations.

Professor Lionel Tarassenko is the founding President of Parks College, and the University is currently undergoing a recruitment process to establish the first Governing Body, who will be responsible for developing and delivering the strategic, academic, financial and operational policies and processes of the college.



Architect image of the Abbots Kitchen, which will be a lounge area

Opposite: Parks College



## A new partnership for Oxford

A landmark agreement between the University and Legal & General Capital has created a blueprint for the University's next phase of development



Oxford University Vice-Chancellor Professor Louise Richardson, and Legal & General Chairman Sir John Kingman, June 24, 2019

Opposite: The Centre for Innovation and Enterprise Begbroke Science Park

### Legal & General commits £4 billion to Oxford partnership

Oxford's high cost of living is very well understood within the University community and wider city. Professor Louise Richardson,Vice-Chancellor of the University, has stated this is why the University will provide at least 1,000 affordable homes for University and college staff and the same quantity again of affordable graduate accommodation.

Delivering such a large development in a socially and environmentally sustainable manner, plus further academic, spinout and commercial spaces at Begbroke Science Park and Osney Mead, requires a partner with both expertise and a vision for the future of cities in this century.

Stepping forward last summer was Legal & General Capital, the early-stage investment arm of Legal & General Group.

John Cummins, Managing Director of Legal & General's Future Cities Business, which sits within the Capital division, believes that Legal & General possesses to an unusual degree overlapping competence in areas such as academic innovation, green energy finance and housing provision, amounting collectively to a blueprint for future cities conceived of as both sustainable and with highquality infrastructure.

Signing the deal in June 2019, Legal & General Chairman, Sir John Kingman, said, 'Universities are a key driver for the growth of cities, acting as a magnet for talent and incubator of growth and innovation. This partnership is a unique opportunity for two of the largest, most established and long-term UK institutions to work together to address Oxford City's future needs, enabling it to continue to be a major centre of growth.'

Professor Richardson said, 'My colleagues and I are delighted to have formed this partnership with Legal & General. We look forward to working together to address some of the most pressing challenges facing the University today. We will build much-needed graduate accommodation, subsidized housing for University staff, and new science parks, where academic departments, University spin-outs and commercial partners can work together to create new companies as

well as high quality jobs.'

Nigel Wilson, CEO of Legal & General Group, said, 'Our partnership with Oxford is leading the way in bringing together dynamic cities and patient capital, creating great outcomes for long term investors and for the cities themselves. Legal & General's partnership with the University is a terrific example for cities across the globe to follow.'

On the specifics of the 50:50 partnership between Oxford and Legal & General, Dr David Prout, Pro-Vice-Chancellor for Planning and Resources, said the agreement was designed to secure affordable rents over the duration of a lease on land whose freehold will continue to belong to the University. He said, 'We also said that the funding put in to the agreements could not be traded on the open market, to ensure that our leases remain with Legal & General.' Dr Prout added that the properties would continue to be managed by the University, 'in order to ensure high standards and provide a University 'front door' for our staff and students.'

## Mathematical, Physical and Life Sciences

The Beecroft Building for experimental and theoretical physics was opened, alongside a host of important research breakthroughs during the year



The Beecroft Building was officially opened by Sir Tim Berners-Lee on 17th September 2018 – This innovative design for theoretical and experimental physics research at Oxford will transform the capabilities of one of the largest physics departments in the world

### Pre-clinical success for a universal flu vaccine

Influenza is considered to be a highly variable virus, able to mutate and escape immunity, but in reality influenza seasons are dominated by only a few strains.

Professor Sunetra Gupta's research group, Department of Zoology, has sought to find an answer to this paradox with extensive mathematical modelling carried out over twenty years.

September 2018 saw a breakthrough. The research team theorized that parts of the virus targeted by the immune system are, in fact, limited in variability. Dr Craig Thompson in Professor Gupta's group has now identified the location of these regions of limited variability. Professor Sunetra Gupta said, 'I think this work serves a good example of how evolutionary models can have translational impact. We have gone from a prediction of a mathematical model to a blueprint for a universal influenza vaccine. The outstanding teamwork coordinated by Dr Thompson is what made it all possible.'

### Site of biggest ever UK meteorite collision found

The precise location of a 1.2 billion year-old meteorite strike was discovered by a group of scientists from Oxford and Aberdeen universities. Evidence of a strike in NW Scotland materialised in 2008, but the location was published in 2019 by a team led by Dr Ken Amor from Oxford's Department of Earth Sciences.



A field photo taken at Stoer showing the laminar beds of sandstone in the bottom of the picture. In the middle is the impact deposit (12m thick at this location) that contains "rafts" of deformed pink sandstone

### Insights on Ocean Warming

A team of Oxford scientists has successfully reconstructed ocean temperature change from 1871 to 2017, a much longer range than previously done. One of the insights of climate change is that an excess of energy in the earth system has been largely absorbed by the ocean. But the absorption is not straightforward because it 'affects circulation by changing the density of seawater', says Prof Laure Zanna (Physics), who led the international team of researchers. The researchers' technique to reconstruct ocean warming is based on a mathematical approach originally developed by Prof Samar Khatiwala (Earth Sciences) to reconstruct man-made CO2 uptake by the ocean.

# Engineering central to Oxford energy superhub

Professors David Howey and Malcolm McCulloch in the Department of Engineering Science are leading the University's involvement in two projects which aim to prove that smarter local energy systems can deliver cleaner and cheaper energy services. The  $\pounds$ 41m world-first Energy Superhub will be built in Oxford, making it a model for cities around the world to cut carbon and improve air quality.

### Oxford to lead quantum computing hub as part of UK's research and innovation drive

In July, then Science Minister Chris Skidmore announced  $\pounds$ 94 million of funding for the UK's Quantum Technologies Research Hubs – including a quantum computing and simulation hub led by Oxford University.

### FACTS & FIGURES:

in the world for Computer Science and Engineering and Technology (THE rankings)

### **16** METRES

Depth of the high-spec labs sitting below the newly-opened

£50M

Beecroft Building for experimental and theoretical physics – the deepest basement in Oxford

Oxford's first overseas research centre for physical science and engineering opened in China in November 2018 – OSCAR, the Oxford-Suzhou Centre for Advanced Research

commercial spin-outs from MPLS Intellectual Property

### Recreating a 'freak wave'

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Oxford researchers helped to recreate a 'freak wave' that brings clarity to a previously misunderstood phenomenon. The wave they created bore an uncanny resemblance to 'The Great Wave off Kanagawa' – also known as 'The Great Wave' – a woodblock print published in the early 1800s by the Japanese artist Katsushika Hokusai.

# **Medical Sciences**

It was an outstanding year for medical science at Oxford, with a new BioEscalator opened and making the fortieth anniversary of the University's leading role in tackling malaria

#### BioEscalator



The Oxford BioEscalator opened its doors to high-potential medical science start-ups in September 2018. It has filled quickly with fast-growing tenants, who have already attracted over  $f_{43}$  million in investment since moving in, with further rounds of funding planned by all companies. There are now 13 companies in residence, employing 75 people, the majority of whom are scientists. The companies are tackling a wide range of diseases through the development of novel diagnostics, therapeutics and platform technologies. Nearly one third of the CEOs are women

The BioEscalator is also a hub for entrepreneurial biosciences for the University and the region, organising and hosting events aimed at increasing the collaboration between University researchers, companies small and large and the wider innovation ecosystem.

# World's first gene therapy operation for common cause of sight loss



Oxford researchers have carried out the world's first gene therapy operation to tackle the root cause of age-related macular degeneration (AMD), the UK's most common cause of sight loss.

The procedure was carried out at the John Radcliffe Hospital by Professor Robert MacLaren, Professor of Ophthalmology at the University of Oxford, with the support of the NIHR Oxford Biomedical Research Centre in a clinical trial sponsored by Gyroscope Therapeutics, a UK-based company developing geneticallydefined therapies for the treatment of eye diseases.

The operation involves detaching the retina and injecting a solution containing a virus underneath. The virus contains a modified DNA sequence, which infects cells, called the retinal pigment epithelium (RPE), and corrects a genetic defect that causes AMD. Ideally the gene therapy should only need to be performed once, as the effects are thought to be long-lasting.

#### In its first 12 months, the BioEscalator hosted more than 30 events, bringing over 850 people through its doors. These included events in partnership with OBN, UK BioIndustry Association (BIA) and Innovation Forum.

Building on the success of the BioEscalator, the Medical Sciences Division is now starting to plan a second, larger BioEscalator2 to support more start-ups for longer and further enhance the innovation ecosystem for the medical sciences in Oxford.

Oxford University's Old Road Campus is home to much of the University's worldleading clinical medical research and a stone's throw from Oxford's hospitals. The Innovation Building, in which the BioEscalator is housed, is also home to Novo Nordisk's Research Centre Oxford. The result is a campus with a powerful mix of world-leading research, innovative start-ups and pharma.

### Scientists catch heartbeat 'molecular switch' in action

Oxford researchers have developed a new method that uses a protein originally found in marine corals to visualise the flow of calcium that makes the heart beat.

The researchers used this technique to uncover the effects of genetic errors contributed to a heart condition that is the leading killer of healthy people between the ages of 20 and 40 in the UK.

During its lifetime, the heart contracts millions of times to pump blood around the body. Charged particles of calcium control how hard and how often the heart contracts. Until now, there was no direct way to track the ebb and flow to the fibres that respond to calcium in order to make the heart beat.



### Oxford tackling malaria for 40 years

A particular cause for celebration was the 40th anniversary of the establishment of the Mahidol Oxford Tropical Medicine Research Unit (MORU), a research collaboration between the University, Mahidol University in Bangkok and the Wellcome Trust. MORU was set up in 1979 by David and Mary Warrell with the support of Professor Sir David Weatherall and is a key part of Oxford's large and extensive global health network, which extends throughout Asia and Africa. Research at MORU has been pivotal to the global medical community's understanding of malaria and its treatment and prevention. MORU's focus on patient-centred clinical research in local populations continues to have real-world, lifechanging global impacts. Malaria testing at SMRU on the Thai-Myanmar border

#### FACTS & FIGURES:

Ranked

in the world for medicine clinical, pre-clinical and health, for the 8th year running (9th at time of printing)\* \*data from Times Higher Education

> 7,000 research outputs

# £355M

in research income

Research projects in over

> 25 countries

101 countries represented among staff

commercial spin-out companies

### Natural Killer cells used to treat chronic pain by removing damaged nerves after injury

Damage to nerves during surgery or after an injury such as a slipped disc can lead to long-term pain. An international collaboration of scientists, led by Alexander Davies and Simon Rinaldi from the University of Oxford, has found that specialised cells within the body's immune system – Natural Killer cells – play a significant role in removing damaged nerve fibres. This process allows new healthy nerves to re-grow, thereby helping to resolve nerve pain. It is already known that Natural Killer cells play an important role in fighting cancer, in both mice and humans. In some cancer treatments, their function is enhanced by using drugs to make the cells more active.

In this study, the team used a similar approach to make the Natural Killer cells more effective in removing damaged nerve fibres in mice. They showed that better removal of these damaged fibres reduced the hypersensitivity associated with chronic nerve pain.

# Social Sciences

Oxford researchers often find themselves at the forefront of thinking about highly topical issues, none more so than in the University's Social Sciences Division

### Seven moral rules found all around the world

Anthropologists are uniquely placed to answer long-standing questions about moral universals and moral relativism, and Oxford researchers believe they have now discovered seven universal moral rules. The rules are to help your family, help your group, return favours, be brave, defer to superiors, divide resources fairly, and respect others' property. The study, the largest of its kind, surveyed 60 cultures and were published in Current Anthropology. The team from Oxford's Institute of Cognitive & Evolutionary Anthropology (part of the School of Anthropology & Museum Ethnography) analysed ethnographic accounts of ethics from 60 societies, comprising over 600,000 words from over 600 sources. Dr Oliver Scott Curry, lead author and senior researcher at the Institute, said: 'The debate between moral universalists and moral relativists has raged for centuries, but now we have some answers. People everywhere face a similar set of social problems, and use a similar set of moral rules to solve them. As predicted, these seven moral rules appear to be universal across cultures. Everyone everywhere shares a common moral code. All agree that cooperating, promoting the common good, is the right thing to do.'



# Violent video games not associated with adolescent aggression



Researchers at the Oxford Internet Institute have found no relationship between aggressive behaviour in teenagers and the amount of time spent playing violent video games. The study used nationally representative data from British teens and their parents alongside official EU and US ratings of game violence. The findings were published in *Royal Society Open Science*.

'The idea that violent video games drive real-world aggression is a popular one, but it hasn't tested very well over time,' says lead researcher Professor Andrew Przybylski, Director of Research at the Oxford Internet Institute. 'Despite interest in the topic by parents and policy-makers, the research has not demonstrated that there is cause for concern.'

The study is one of the most definitive to date, using a combination of subjective and objective data to measure teen aggression and violence in games.

# New evidence proves the work of UN agencies is effective

Academics led by Professor LucieProfessor Cluver, Professor ofCluver at Oxford University haveChild and Family Social Work inshown how key services in lower andOxford's Department of Socialmiddle-income countries can contributePolicy and Intervention, said: 'Thisto multiple sustainable developmentnew evidence is a step forward ingoals (SDGs), even for the highest-riskGoals. Even for one of Africa's most

The study, led by Oxford in collaboration with the universities of Cape Town and Witwatersrand, University College London and the United Nations Development Programme (UNDP), is the first to test the UN's concept of 'accelerators': provisions that can improve the lives of vulnerable populations in not only one SDG area, but many. It finds clear evidence for these, even among an exceptionally high-risk group, adolescents living with HIV in South Africa. It goes further to find that simple combinations of accelerators - such as parenting support, cash transfers and safe schools - provide even greater impacts.

Professor Cluver, Professor of Child and Family Social Work in Oxford's Department of Social new evidence is a step forward in reaching the Sustainable Development Goals. Even for one of Africa's most vulnerable groups - adolescents living with HIV and AIDS - the right combinations of programmes can help. By providing social welfare grants, safe schools and supportive parenting for these highest-risk teens, we can make substantial positive impacts across health, education, gender equality and violence prevention. We are delighted to be working with UNDP, UNICEF and other agencies to use these new findings in their work with governments across Africa.'

The Accelerating Achievement in Africa's Adolescents Hub is a partnership between African and UK universities, and international agencies such as UNDP, WHO and UNICEF.

ANNUAL REVIEW 2018/19 PAGFS 16–17



# Plant-based foods are good for both health and the environment

New analysis by researchers from the University of Oxford and the University of Minnesota has identified a range of 'win-win' foods that both improve human health and have a low impact on the environment. Foods associated with improved health also have some of the lowest environmental impacts, they found (see chart below). Such foods include whole grain cereals, fruits, vegetables, legumes, nuts and some vegetable oils high in unsaturated fats, such as olive oil. Foods with the largest negative environmental impacts – unprocessed and processed red meat – were consistently associated with the largest increases in disease risk. Lead author Dr Michael Clark, of the Livestock, Environment and People (LEAP) project at the Oxford Martin School, and the Nuffield Department of Population Health, notes that diets are a leading source of poor health and environmental harm. 'Continuing to eat the way we do threatens societies, through chronic ill health and degradation of Earth's climate, ecosystems, and water resources.



### FACTS & FIGURES:



in philanthropic income

over 6,000 students, including 4,125

postgraduate, the largest student group in the University

Students come from

countries

More than **1,200** academic and research staff

**57%** of our staff are from the UK and the EU

## 1st

Launch of sOPHIa Oxford, the University's first social enterprise spin-out, to tackle global poverty

## Gardens, libraries and museums

The University's four museums, together with the Bodleian Libraries and Botanic Gardens, operate at the creative border between research, outreach, teaching and the community

Multaka volunteer Waed Alawad describes the workings of an astrolabe at the History of Science Museum



### Welcoming Migrants into the University

Bulk

WESTON LIBRARY

Multaka-Oxford at the History of Science Museum and Pitt Rivers Museum creates inclusive volunteering opportunities in the museums for forced migrants who have recently arrived in Oxford. Multaka – which means meeting point in Arabic – results from strong University relations in the local community with organisations including Asylum Welcome, Connection Support and Refugee Resource. To date, the museums have recruited a team of over 50 volunteers who have recently arrived from countries including Syria,

### Oxford's Tolkien blockbuster

The special exhibition Tolkien: Maker of Middle-Earth ran at the Weston Library in 2018. Curated by Tolkien Archivist Catherine McIIwaine, the exhibition welcomed over 138,880 visitors and received coverage in over 460 news outlets worldwide. The free-access exhibition brought a global audience inside the Bodleian Library, many for the first time. It incorporated the family papers, literary archive and a collection of Middle-earth related artwork produced by Tolkien and held by the Bodleian Libraries, the largest and most significant collection of Tolkien material in the world. With 847,628 visitors in 2018-19, the Weston Library was the most popular single visitor attraction in Oxfordshire.

Iraq, Egypt, Zimbabwe, Sudan, Burma and Oman, and have been helping them learn new skills and gain work experience. Originally a two-year project, it won a Museums + Heritage Award for Volunteers of the Year in May 2019.

### Reflecting on Rwanda

The photographic exhibition at the Pitt Rivers Museum, Kwibuka Rwanda, told the story of genocide survivors' attempts to come to terms with loss and trauma. It gave voice to the 'caretakers' - survivors who work at memorials, honouring the dead by cleaning and preserving their remains. The exhibition, which has travelled internationally and attracted global attention, was based on Dr Julia Viebach's extensive research on memory and justice in Rwanda between 2009 and 2014, with the photographs presented reflecting the visual method used during her fieldwork. A follow-up exhibition, Traces of the Past, commemorated the occasion of the 25th anniversary of the genocide in 2019.

### Pitt Rivers Museum – shortlisted for Art Fund Museum of the Year 2019

The Pitt Rivers Museum was shortlisted for this prestigious prize for its creative programmes of reinvention and reinterpretation, which show a muchloved Victorian space challenging perceptions and demonstrating the vital role museums can play in contemporary society. Partnerships cited include a collaboration with Maasai communities to change the narrative used by UK museums to display Maasai artefacts, and a project with LGBTQ+ stakeholders to reshape the museum as a welcoming inclusive space, and partnerships with contemporary artists, such as Tibetan photographer Nyema Droma.



Pitt Rivers main court, with Performing Tibetan Identities exhibition

### A Nice Cup of Tea?

A contemporary art installation in the Ashmolean's European Ceramics Gallery which runs until 22 March, 2020, features a specially commissioned work by artists Enam Gbewonyo and Lois Muddiman. The installation commemorates the 70th anniversary of the arrival of the Empire Windrush and encourages visitors to look behind the luxury tea cups and sugar bowls in the museum's collection and discover a different story about the colonial history of tea, sugar and transatlantic slavery. The project was developed in partnership with local African-Caribbean community group, BK LUWO; African Caribbean Kultural Heritage Initiative; Oxford Windrush Planning Group; and Oxford City Council.

### New marine reptiles on show

The largest single new permanent display in the Museum of Natural History for decades, Out of the Deep features two large plesiosaur skeletons on full display for the first time. Marine reptiles which became extinct around 66 million years ago, the two creatures have been brought to life through digital animations, physical models and touchable elements. The short-necked plesiosaur was discovered by a former Museum of Natural History curator in the 1990s in Yarnton, Oxfordshire, while the larger long-necked plesiosaur was found in a quarry in Cambridgeshire in 2014 by the Oxford Clay Working Group, and donated to the museum's collections by the quarry's owner Forterra.



#### Plesiosaur within a new permanent exhibition Out of the Deep at the Museum of Natural History

their time museums house

objects and specimens, including a fragment of a 4.6 billion year-old meteorite and the most important group of Raphael drawings in the world



the University's gardens, libraries and museums

online engagements

outside Oxford in 2018-19

129,800

delivered to school children

research outputs produced in 2018-19 including research reports and conference contributions

21.200 hours of

# **Oxford in the Community**

The University has a strong track record of cultivating open dialogue with its many constituencies both internal and external, and has become a champion of entrepreneurial values for problem solving

# Oxford University named a top 100 lesbian, bisexual, gay and transgender staff (LGBT) employer

For the first time the University was placed on charity Stonewall's Top 100 Employers list, which is an annual audit of LGBT inclusion by employers across workplaces, services and communities.

Oxford University has long been a proud member of the Stonewall Diversity Champions programme, participating annually in the Workplace Equality Index, but this was the first time that the University had placed in the top 100 UK employers list. The University's placement on the list is an encouraging sign that its wide range of activity is bearing fruit. The University is an institution which is proud to offer a place of study and work that is both safe and welcoming to

LGBT+ students and staff. As part of the Top 100, Stonewall collects more than 92,000 anonymous responses from employees on their experience of Britain's workplace culture and diversity.



### Oxford Foundry hits its stride



The Oxford Foundry (OXFO) is a unique, cross-university centre for entrepreneurial growth that really took off during the year in review after opening in October 2017.

August 2018 saw the first OXFO L.E.V8 ('Elevate') Women Programme, an extension of the original L.E.V8 accelerator for early stage ventures. Participants on the L.E.V8 Women programme reported that their confidence in pitching their business idea increased from 68% to 92%; their confidence to embrace risk increased from 65% to 80%, and their belief in their ability to achieve success with their business within 3 years went from 58% to 75%. Existing for all Oxford students and also engaging the broader international community of entrepreneurs, the OXFO L.E.V8 ('Elevate') Women Programme was rapidly followed by OXFO's first Demo Day, which saw nine pitches for investment by previous L.E.V8 participants to 180 venture capitalists and angel investors.

OXFO has cemented its role as a home for immersive entrepreneurial learning, early-stage venture acceleration, and a welcoming space for all members of the Oxford University student community to meet, connect and feed their entrepreneurial curiosity, no matter what they are studying, or what they wish to do or become in their post-Oxford careers.



Ana Bakshi, Directory of the Oxford Foundry



# Community project to inspire children's love of reading wins Oxford support

Oxford manages a thriving Community Grants Scheme which allows the University to support innovative projects that provide life changing opportunities to local residents. Most recently the scheme supported Windale Primary School of Blackbird Leys, Oxford, with  $\pounds 2,400$  towards their innovative approach to nurturing a lifelong love of reading. The school, which is part of the United Learning Trust, will use the funds to expand and develop its library, and hopes to further encourage the children to pick-up a book by introducing a weekly competition that rewards them for reading, both as part of the school curriculum and for pleasure.

### Standout teachers honoured

Ten state school teachers were honoured by Oxford University for the 'inspirational' impact that they and their approach to learning have had on past students. The winners, from across the UK, were first nominated for 'Inspirational Teachers Awards' by current first-year Oxford students, who wanted to recognise and thank them for the time and effort their teachers put in to supporting and encouraging their ambitions to earn a place at Oxford. The awards programme turns ten in 2020 and has become a vibrant part of the University's outreach to schools.

#### FACTS & FIGURES:

**1,000** Oxford students participating in OXFO outreach activities

## 87

number of nationalities of student who have used OXFO

### 180

number of investors drawn in to OXFO's first Demo Day in September 2018 to receive pitches from Oxford student entrepreneurs

10

Number of years Oxford has now been awarding inspiring teachers in the community

# Development

In 2019 we celebrated the successful conclusion of the Oxford Thinking Campaign, which raised an amazing £3.3 billion in support of the University and the colleges



Hoffmann and Action Medical Research Professor of Developmental Medicine, Georg Holländer (centre) with research assistants Hector (left) and Emma (right)

> By 31 July 2019, Oxford's largest ever fundraising campaign had raised in excess of  $\pounds$ 3.3 billion against a target of  $\pounds$ 3 billion. Having secured the support of more than 170,000 donors over a 15-year period, the Oxford Thinking Campaign is the most ambitious and successful campaign for higher education in Europe.

The impact of the campaign is immense. By supporting a wide range of research programmes and academic posts, as well as scholarships, access programmes, buildings and equipment, donations have provided a tremendous boost to the University's mission to advance learning through teaching and research.

The colleges played a magnificent role in driving up alumni engagement, while the campaign allowed the University to forge a platform to better communicate the world-leading nature of its research and teaching. This resulted in a varied donor profile (21% of donations to the University came from non-alumni individuals), reflecting the appreciation of Oxford's leadership status in global higher education and its role in a world demanding urgent solutions to myriad problems.

This is particularly reflected in the creation of a number of new academic programmes and centres across a range of cross-disciplinary subject areas. They include:

- The Oxford Martin School
- The Li Ka Shing Centre for Health Information and Discovery
- TORCH (The Oxford Research Centre in the Humanities)
- The Wolfson Centre for Quantum Science and Technology
- The Blavatnik School of Government
- The Oxford Hintze Centre for Astrophysical Surveys
- The Smith School of Enterprise and the Environment

By ambitiously communicating the University's needs and objectives, the collective fundraising effort secured a number of exceptional gifts during the campaign, including a gift of  $\pounds$ 150 million from Stephen A Schwarzman to establish the Schwarzman Centre for the Humanities – the biggest donation to a UK university. The campaign has raised ambitions for fundraising at Oxford and, at the same time, set a new standard for philanthropy in higher education in Europe.

Although the Oxford Thinking Campaign has now concluded, philanthropy remains a vital source of income for the University and the colleges. With bold plans to greatly increase the number of graduate scholarships on offer, further enhance access opportunities for talented students, and uphold Oxford's tradition of excellence in all aspects of teaching and research, there continues to be ample scope for donors to create lasting impact.

To find out more about the Oxford Thinking Campaign visit: www.development.ox.ac.uk/ report2018–19



### **IN NUMBERS:**

**£3.3BN** raised through the Oxford Thinking Campaign

**170,000+** donors made a gift to the campaign

£722M raised for research activities and programmes\*

> £434M raised for buildings, infrastructure and

**<u><u><u></u></u>S410M** raised for endowments\*</u>

175 posts supported, many of them endowed\*

### **Financial overview**

- Oxford University generated a total income of almost £2.45 billion in the financial year 2018/19. Excluding the educational publishing activity of the Oxford University Press, the rest of the University generated £1.63 billion in income, a 2.3 per cent increase on the previous year.
- The University's internationally outstanding research remained the largest source of this income, with overall research awards increasing from £579 million to a record £625 million. Oxford currently has 4,475 active research awards worth more than £3.4 billion and has the highest externally-funded research income of any UK university. The strength of our research has been underlined recently with the award of two Nobel prizes for scientific breakthroughs at Oxford.
- Income from research awards and contracts reached a record £624.8 million.
- The University's financial position remains strong, underpinned by

its highly successful spin-out companies and educational publishing activities, as well as prudent investment in the charitable endowment, which returned  $\pounds$ 79 million to the University this year.

- We created 19 new spin-out companies in the past financial year, taking our total to 139, more than any UK university, and our share in the value of those companies grew by 10% to over £170 million. Philanthropic donations remain strong, including the landmark £150 million gift from Stephen A Schwarzman to create a new Centre for Humanities. The Oxford Thinking fundraising-campaign closed after exceeding its target, raising £3.3 billion for the corporate University.
- The University is also continuing to identify new revenue streams and control costs carefully, as well as finding new ways of financing investment. One outstanding

example of this innovation is the new partnership with Legal & General, through which Legal & General will invest up to  $\mathcal{L}4$  billion in staff and graduate accommodation and new science parks in Oxford.

- The University continues in a strong financial position with increases in net assets (to almost  $\pounds 4.2$  billion).
- Our educational publishing activity ("Oxford University Press") had a successful year, winning 98 awards for its academic and education resources and seeing a 23% increase in use of academic and research platforms
- The University will continue to invest in its future, under the clear direction of its strategic plan. Priorities include increasing our postgraduate numbers as key to sustaining our global pre-eminence for research, as well as continued sustainable investment in our buildings, facilities and affordable accommodation for our staff and students.

# University consolidated income and expenditure account 2018/19

Income	£m
Tuition fees and education contracts	354.0
Funding body grants	193.1
Research grants and contracts	624.8
Publishing services	809.2
Other income	251.8
Investment income	104.6
Total income before donations	2,337.5
Donations and endowments	97.7
Donation of heritage assets	14.9
Total income	2,450.1
Expenditure	
Staff costs	1,051.2
Staff costs - movement in pensions provision	285.9
Operating expenditure	1,066.8
Depreciation/amortisation	145.2
Interest and other finance costs	33.1
Total expenditure	2,582.2
Deficit before other gains	(132.1)
Gains on investments	237.1
Share of surplus/(deficit) on Joint Ventures	(2.4)
Surplus before tax	102.6
Taxation	(5.4)
Minority interest	(3.0)
Surplus after tax	94.2
Other comprehensive income	2.2
Total comprehensive income	96.4

### FACTS & FIGURES:

2.3% increase in University income over the previous year

4,475 the number of active research awards at Oxford

> 2 Nobel prizes won

spin-out companies in the past year

**98** number of awards garnered by Oxford University Press

**£624.8M** income from research awards and contracts





To view further information about the University's year in review, including video interviews and slideshows, visit:

www.ox.ac.uk/annual-review

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