Today, the 987-strong student population at Jesus College is a welcoming community of graduates and undergraduates, including 448 women. The Society consists of 85 active Fellows, 41 of whom are women. It was not so long ago that the number of women in both these categories was zero.

There is evidence that for centuries some students and Fellows quietly advocated the admission of women. However, it was not until 1974—amid gender-equality discussions at a national level throughout the 1970s—that the College voted to repeal the 1926 Statute I.6: “No woman shall be elected or admitted as Pensioner, Scholar, Officer, Fellow, or Master of the College”.

The first woman Fellow, Professor Lisa Jardine, was admitted in October 1976. Three women research Fellows soon followed. Five women graduate students entered the College in 1978 (see p.9 of this issue). In Michaelmas Term 1979, 31 women became the first cohort of women undergraduates.

On Saturday 12 October 2019, the College is thrilled to celebrate the start of “The Fortieth”—40 years of mixed education. This first day will include lectures and panel discussions, and tours of the Boat Club and Old Library as well as of the College’s works of art. A special Evensong/Chapel service and dinner will take place in the evening.

Further information about and an invitation to this first day of the 2019 celebrations will be sent out in May to all College members.
Farewell from the Master

Dear Jesuans

This is the last Jesuan News for which Margaret and I hold our current roles and, as a result, we would like to take this opportunity to thank you most sincerely for your interest in and support of the College. We have been repeatedly moved by the many kindnesses shown, and enriched by what we have learnt from you and your many encouragements.

Your role in the College has never been more important. Some of you attend alumni events such as the Garden Party, and in doing so are a great encouragement to Margaret and me, and to the Fellows. Others attend student arts events or support the life of the Chapel and its Choirs. Others are to be found on the towpath or field, coaching sport in a manner that is also deeply valued. Still others engage directly with us, advising on a range of College matters at committees. Finally, some of you have spoken at established and new events, such as those held in the Frankopan Hall.

You have also been very generous financially and, quite simply, shaped the College powerfully in recent years, particularly through your financial support of West Court. Without your donations, the Court would not be what it currently is, and it is always humbling for me to pass along the Donors’ wall on the first floor of West Court and see the huge commitment of Jesuans to that very special series of buildings. Of course, we have been enormously grateful too, for your support of other aspects of College life, including its teaching, and I know from the letters I receive that our students are extremely appreciative of the financial assistance afforded by your gifts.

I would also like to thank Emily Williams and her colleagues in the Development and Alumni Relations Office for their outstanding work. I pay great tribute to them as their devotion to the College has been unwavering, resulting in great benefit for many.

We move from Cambridge with considerable sadness and will miss Jesus College. It is in our view the best college in Cambridge—we would not want to be at another one. On the basis of applications, it is the most popular in Cambridge, with strong academic performance among the top handful of colleges, while having outstanding extracurricular activities and student achievements alongside.

The Fellowship continues to receive international recognition for excellence, that excellence being mirrored by the staff who are so committed to the College and universally proud to be so despite the hard work this entails. During our time in this role, the College endowment has grown by approximately 40%, vital if we are to continue to sustain our activities in such challenging times for higher education. None of this would have been possible had we not been in receipt of your extraordinary kindness and generosity.

Thank you so very much.

Professor Ian White FREng

The Revd Dr Paul Dominiak

In September of this year, Paul, who arrived at Jesus College in 2015 as Dean of Chapel, will be leaving to take up an appointment as Vice Principal at Westcott House, a theological college situated directly opposite Jesus.

Westcott House was founded in 1881. It largely trains people for ordained ministry in the Church of England. Indeed, it was where Paul himself trained. He will work closely with the Principal, Canon Chris Chivers, to develop theological education and formation that meets the ambition of the Church to grow in number and depth.

For Jesuan News, Canon Chivers comments: “Paul brings academic rigour, pastoral sensitivity and a passion for the best of the Anglican polity at a time when all three are vital components for those preparing for public ministry.”

Paul says he will miss Jesus College deeply: the people—Fellows, staff and students—who (in Paul’s words) “make up such a friendly, welcoming and inclusive community bonded together by the common good”. Noting of course his continuing proximity to the College, we wish him every possible success in his new place of work.
A new committee

The College has seen the recent establishment of an Equality and Diversity (“E&D”) Committee, which will meet once a term and report directly to College Council. Its purpose is to promote an inclusive platform to assess, consider and advise on equality and diversity issues in College. Matters of discussion might include policy and practice around E&D issues, training and awareness, gender pay gap, student admissions, access and diversity. Its remit will cover students, staff and Fellows.

The first Afro-Caribbean President of the MCR is Rohan Clarke (see his report on p.5). He welcomes the new initiative.

“Jesus College is demonstrably aware of the diversity and inclusion issues at play in the University. As a trustee of the College, while MCR President, I will continue to leverage the representational skills acquired during my time in the Jamaican diplomatic service to support efforts to strengthen diversity here.”
The past year has seen the Intellectual Forum's activities continue to grow and expand. We have organised a huge range of diverse events, for internal and external audiences, provoking people to think and to act.

Highlights have included star guest speakers such as Harry Shearer (behind legendary 1984 mockumentary *This Is Spinal Tap* and provider of voices for *The Simpsons*), who entertained and fascinated the audience with his description of satire and politics—given the way politics are going in the UK and the US, do we need satirists? We also hosted the amazing Baroness Helena Kennedy QC, who gave the 2019 Lisa Jardine Lecture about the risks to the rule of law.

“We have tried to make a difference in the world”

We have continued to engage with China. The Intellectual Forum is now the proud owner of Gerry, a state-of-the-art service robot from one of China’s leading home-robotics companies, Chuangze, after their CEO, Ken Li, came to talk about China’s attitude to robots and automation.

We have also tried to make a difference in the world. One educational event brought together teachers with academics and policy-makers to discuss what should be on a school curriculum. Another conference, joint with the Wellcome Trust, considered what the rules for tech companies using patient data should be; and it has already changed national policy.

For the second year in a row, we hosted the European leg of the Yidan Prize Conference. This is the biggest education prize in the world, at $4 million per winner, and we were delighted to have with us both laureates, Professors Larry Hedges and Anant Agarwal, as well as other distinguished speakers.

On the artistic side, we have featured two film world premières: *The Secret of Kettle’s Yard* by Cary Parker and Impermanence Dance Theatre’s adaptation of a 1915 pacifist allegory, *The Ballet of the Nations*. We also hosted the award-winning New Zealand film-maker Gaylene Preston for two months and many students enjoyed discussing their project ideas with her.

Internally we had two excellent summer students, Todd Gillespie and Victoria Taylor, whose projects on disinformation and access to healthcare for vulnerable people were highly successful, academically and in terms of providing policy advice.

Dr Julian Huppert, Director

For all past and future events, please go to www.jesus.cam.ac.uk/research/intellectual-forum
Cockerels oarsmen row again

Neil Ellwood had a long career in medicine, then arrived as a mature student in 2016 to read Theology at the College. He reports on getting some Jesuans back in the boat

What would you call a boat crew composed mainly of Jesuans who last rowed about 40 years ago? Several references to “Jesus Cockerels” can be found in a 1962 book, The Jesus College Boat Club 1827-1962, by Freddie Brittain and Humphrey Playford. Just such a crew competed in various regattas in the early 1930s but disappears from the records after it rowed at Bedford Regatta in 1935.

The OED definition of “cockerel” is “a young cock”. This convinced us that the name Jesus Cockerels was perfect for our alumni crew for 2018’s Fairbairns. We then had to track down eight “young cock” prepared to risk life and limb, and face a 4,300-metre endurance race.

Over the summer, JCBC alumni who might be interested in this hare-brained scheme were contacted. One or two had continued to row since going down but most hadn’t raced for 30 or 40 years. Eight volunteers were selected. Because of work and other commitments, only two preparatory outings were possible. Both coincided with novice regattas, and this further limited our ability to rediscover our rowing muscles and remember which end of the oar went in the water. Nevertheless, we gathered at the Jesus College Boathouse on the Friday morning of Fairbairns, 30 November 2018, with a great sense of excitement. In Rachel Pomery we had a Jesuan cox with huge experience of Fairbairns, and—undeterred by the real possibility of a dunking in the Cam—she bravely agreed to steer us along the treacherous course.

Our unrehearsed start was inevitably shaky but we soon settled into a comfortable rate of 29 strokes a minute and maintained this for the entire race. Our half-way time of 6’15” was surprisingly good. However, time of 19’44”—by no means a bad effort given an average age of 62. Most gratifyingly of all: we weren’t last.

Back at the Boathouse some tired arms and wobbly legs were just about able to remove the boat from the water and safely onto the rack. Liquid refreshment in the Old Spring pub followed: arms recovered quickly, legs became rather wobblier.

Neil Ellwood had a long career in medicine, then arrived as a mature student in 2016 to read Theology at the College. He reports on getting some Jesuans back in the boat

Brick of memory

In spring 2017, David George (1962) visited Jesus College for an alumni dinner. In the afternoon, he went to the barbers on Jesus Lane

“As he cut my hair,” David says, “the barber found out where I was from and started listing the important College people who’d visited the shop over the years. One of these, with a mention of Bletchley Park, was Derek Taunt.”

Dr Taunt was David’s tutor, a Maths alumnus of the College, and later Bursar and Fellow. David knew nothing of the connection between the Jesuan and the famous codebreaking site near Milton Keynes, so he looked up a few things online. Dr Taunt was indeed part of the team who on worked Enigma, the code the Germans used throughout the Second World War, first broken successfully by the British in 1940. Derek was at Bletchley from 1941 to 1945. When David was up at College, no-one had an inkling of this wartime service, as it was—as for all codebreakers—veiled in official state secrecy.

“In summer 2018,” David continues, “I dropped by Bletchley Park. Bricks were by then being mounted on a special wall around Hut 8, with the names of Bletchley staff engraved on them. I saw that Dr Taunt did not have a brick, so I got him one. You sponsor a brick: it’s a way to raise funds for the park.”

Dr Taunt, who died in 2004, once wrote: “To have been a non-passenger in a team of such calibre and with such victories to its credit seems to me to justify some modest satisfaction. Our happy band may not have been with King Harry on St Crispin’s Day but we had certainly not been abed and have no reason to think ourselves accurs’t for having been where we were.”

The marks under every brick’s name spell out “dot-dot-dot-dash”: Morse code for V for Veterans.
The Jesus student

Current President of the Jesus College Student Union, Sorcha Keenan (2017), reading Spanish and Latin, has all the updates so far on College events, and on the year’s sporting and cultural highlights

Since being elected at the end of Michaelmas Term, the JCSU 2019 Committee has been enjoying its various roles and organised many events for the student body. At the start of Lent term, we held Jesus College’s first Refreshers Week, which featured events promoting welfare and helping first years settle back in to College life. In Lent Term, the Ents Officers set up a new initiative called “Friday Night Jesus”, with something fun going on in College every Friday, such as a silent disco, live music and much more.

We also put on themed formals celebrating LGBT+ history month and raising money for charities. Emma Loffhagen (Women and Non-Binary Officer) organised a series of events marking International Women’s Day. These included talks from Oxford student and businesswoman, Grace Beverley, known as GraceFitUK due to her skyrocketing following on Instagram, the 100 Women I Know project and Africa Brooke, a writer, speaker and social activist, culminating in an International Women’s Day formal.

As ever, our sports teams have continued to perform very well. In football, the women’s team have made it through to the finals of Cuppers. Jesus’s W1 boat also won the Fairbairn Cup race, with town crews and boats from Oxford and Cambridge colleges in competition. Back in Michaelmas, we flourished against Jesus College, Oxford, travelling there to play football, hockey, netball, lacrosse, badminton, tennis, rugby and squash. A comprehensive victory in the women’s football started the day, and after a series of wins and losses we were happy to finish things off with a last-minute goal in the mixed-hockey match, securing a win. We look forward to welcoming our sister college in Cambridge later this year.

The John Hughes Arts Festival was enjoyed by many in the College community. Beginning with the now annual art exhibition in the open-hang gallery, the festival saw wonderful events taking place over the February weekend, including live music at brunch, a sculpture tour of College and a secret postcard sale. Alessandro M. Rubin (2016) also co-curated an exhibition, “William Congdon: American Modernist Abroad”, in collaboration with the College’s Art History Fellow, Dr Donal Cooper, and the Congdon Foundation.

Preparations for the Jesus College May Ball have been underway with, as announced at February’s launch, the theme “Refract”. This will surely be another major high point, affording, as usual, everyone an end-of-exams opportunity to let their hair down!

News From The MCR

The 2018-19 academic year has been exceptional. The MCR community welcomed 178 new graduate students, an 11% increase over last year. There has also been a noticeable increase in the level of engagement in MCR events, with an over-subscription of Graduate Halls.

In Michaelmas Term, we continued the tradition of treating new graduates to two weeks of exciting activities during Freshers Fortnight. These included a Graduate Welcome Hall at which several Fellows participated in the Three-Minute Thesis competition. This highlighted the rich intellectual tradition within College and the broad spectrum of cutting-edge research in which its academic staff is engaged.

Additionally, we successfully re-launched a College Parents Scheme to provide an additional layer of pastoral care for Freshers, and continued our regular welfare brunches, wine-tastings and movie nights with pizza.

Held bi-weekly, our Conversational English Tea, in the Prioress’s Room, has been amazingly well-received. This new initiative provides a relaxed atmosphere for interested international graduates to discuss art, politics, and their respective cultural experiences and disciplines. I’ve also sought to forge stronger relationships with other MCRs, facilitated by increased swaps, joint events and the negotiated access of Jesuans to events at other colleges at concessionary rates.

In addition to our Refreshers Graduate Hall, Burns Night Hall and bop, we designated Sunday 27 January as “Jesus College Family Day”, which allowed new and existing Jesuans to connect and explore life outside College.

An additional highlight in Lent Term was the successful staging of our Graduate Conference in March, at which our keynote speaker was Seán Ó hEigeartaigh, Executive Director of the University’s Centre for the Study of Existential Risk.

Recently, two trustees have been appointed by the MCR Committee to chair an open-ended working group on constitutional reform, which reflects my commitment to inclusive leadership. Consultations with MCR members and senior members of College are ongoing, and the proposed amendments are expected to be adopted at the next MCR Annual General Meeting and subsequently by College Council. Among the progressive moves is the proposed establishment of the post of Black and Minority Ethnic Officer to champion issues of access, inclusion and diversity within College, allowing greater participation of registered partners and spouses of graduates within our vibrant community.

It would be remiss of me not to extend my profound gratitude to the Graduate Tutors for their invaluable support of the MCR. Furthermore, I wish to recognise and applaud this year’s Committee for its tireless dedication to serving our graduate community, and to ensuring that Jesus College retains its coveted reputation as the premier place to live, work and study in the University.

Rohan Clarke, MCR President
Can you say what you think your appeal to the College was—the one thing you reckon it needed that you fulfilled?

Rachel Evans: One thing—among others—is, to be blunt, that I am a female Natural Scientist.

JN: Does that imply there aren’t that many?

RE: In general, yes, though that’s not of course talking about this particular area. In interview I’m probably not intimidated about saying what I think. I guess it also came up that I had successfully applied to Cambridge as an undergraduate and turned the offer down. I simply thought, from. Today, widening participation is something I am very interested in.

JN: Does this research have potential commercial, or perhaps identifiable practical, value?

RE: Absolutely. We know that global warming is real and, you know, we have a really urgent deadline—of 2030—to cap our warming rate by under a degree. The only way to do that is by substituting fossil fuels with renewable technologies. Solar energy is going to be important for sure but developing something as established as the panels I’ve mentioned takes 50 years or more. We’re aiming to make materials that can be added quickly, and cheaply, to existing solar cells so that their performance can be increased even by a few per cent. If you were to apply one of our coatings to all the solar panels already installed across the planet, boosting performance by 1%, that would power about 750,000 homes. So these devices could have a huge global knock-on effect.

JN: Can you describe your research group?

RE: I was at Trinity College, Dublin, for eight years: there, I had a research group, then made the decision, after being offered the Cambridge position, to move from Chemistry to Materials Science. I was winding down the Dublin group and, at the same time, building up my research function here. At the moment, European grant that is effectively enabling me to double in size. We’re called the Photoactive Materials Group.

JN: Solar cells…?

RE: In rooftop panels. A panel is made up of many solar cells. The sun has multiple light energies but, conventionally, solar cells or panels can deal well with only some of them. We try to make coatings for application to solar cells or panels that are already manufactured, which then convert the sunlight into an energy that the solar cell puts to better use. In other words, we’re trying to shape the sun and alter its light to a narrower, more efficient energy spectrum.

JN: What are your other interests? Are you exclusively a scientist?

RE: Far from it. I’ve always been a water baby, growing up not far from the sea. One of my big passions is surfing, which is challenging in Cambridge [as her surfing College colleague, Dr Jonathan Linebaugh, also discovered: see Jesuan News 2018]! Since I moved here, I’ve started doing a lot of stand-up paddle-boarding. That’s my passion. I go a couple of times a year on trips to different places, then, whenever I return to Wales to visit my family, I try to sneak in a quick surf. I like gardening too, growing vegetables in pots, mostly unsuccessfully.
Julius has a wide range of interests, is just 28 and enthuses infectiously about his arrival at Jesus College. “In the space of five minutes, I heard from Cambridge and UCL friends about an advert that had gone online: ‘you must answer it’, they told me. I had also just taken part in a Cambridge Law Faculty away-day, to give some external input, and I knew Jesus College a bit anyway; I’d played cricket here a few times.”

More on that anon. Julius went to Highgate School, north London, where he thought he was going to be a doctor (A-levels: biology, chemistry, physics and history). He completed two UCAS personal statements, one for law, one for medicine. Julius had done work experience but on balance “genuinely couldn’t stomach the image of a bone sticking out of a leg”. At 18, studying law would, he reckoned, leave other doors open if need be…

From 2009 to 2012 he read Jurisprudence at Oxford and did his LLM straight after, at University College London. Bar school followed but the intellectual environment didn’t suit him. He left and got a job teaching back at UCL. Two years later he began a PhD there entitled The Shock of the New: Asserting the Development of the Law of Equitable Wrongs and Detailing its Scope.

“Robert Hughes’s 1980s TV series about modern art, The Shock of the New, has just been rerun on BBC4 and I really like the title... I also enjoy the irony of the fact that no-one is going to be ‘shocked’ by some novel revelations about private-law doctrine.

“English law distinguishes itself by virtue of the fact that it isn’t codified. It’s a patchwork result of all the cases that have been decided, like scattering pick-up sticks on a table. I want to add a time dimension to our understanding of my area of interest, which—in short—is about the rules that regulate what I label ‘interpersonal abuses of power’. It’s mainly historical, because I’m not making any claims about things that are necessarily going to happen. What matters to me is improving our appreciation of where we are.”

He doesn’t think cricket will interfere too much with his plans to finish his PhD by January 2020, but the game is unquestionably a preoccupation. He’s loved football since boyhood, but Julius fell in love with cricket as an undergraduate. His daydreams now always return, he reveals, to batting—rather than scoring a goal for Arsenal in the Cup Final.

The first spark for him was the 2005 Ashes series, when Julius was 14 (England won the trophy back from the Australians for the first time in 20 years). In north London, he’s since helped form a new team, The Interlopers. Players debated long and hard over the name.

“The team’s philosophy is: if you love cricket, you can play. No matter how good or bad you are, or where you went to school. We want to play hard but fair and have a pint with the opposition after. And I have to say that the best cricket match I’ve ever been involved in was at Jesus College against the MCR.”

Julius still has the match report—about eight pages long. Three years ago, The Interlopers, batting first, made a reasonable start but then got into a spot of bother. They tried to play for time so as not to lose, but were eventually scuttled for a low score.

“When fielding, we were facing a heavy defeat. Then a bowler took two wickets in two balls and another a couple of balls later. A lad of ours, now at Peterhouse, then took one of the best slip catches I’ve ever seen. He didn’t even know he’d caught the ball. He stood up and it was in his hand. We won the match by five runs, after a run-out. One of my new colleagues, Dr Sybil Stacpoole, was playing for Jesus and still will not talk about the game!”

Summer is near. Expect more drama on the Close involving this man of law, some time soon…
The energy that drives Africa is its people. Combating the current sub-Saharan diabetes epidemic is a crucial step in giving Africa its energy back. There are over 24 million people in Africa with diabetes and as many as 16 million of them are undiagnosed. They will realise that they have diabetes only after developing one of the many life-threatening health issues associated with the condition.

Compelled by the opportunity to design a solution to address this, three Jesuans decided to team up with a colleague from the Judge Business School, to develop a tool that could facilitate diagnosis and treatment. Our proposal was to use the prevalence in Africa of mobile phones to distribute medically tailored, numbers of affected people.

Data would then be catalogued against phone numbers and regional statistics referred directly to partner organisations that could send mobile clinical-testing units into targeted areas. Individuals would be contacted directly with times and dates for testing. Diagnosed patients would be referred for treatment and high-risk candidates receive sporadic messages to encourage behaviour delaying the onset of diabetes. The tool was to be called 

Once we had developed Afya Njema, our team was invited to a travel project, Charles Butler (MBA, 2018—bottom left, far right) journeyed with fellow Jesuan MBAs Julia Abouaf and Richard Van Der Byl to Kenya looking for a place in Hult’s summer accelerator programme and the chance to win $1 million in seed-funding.

On 12 March 2018 we set off for Jomo Kenyatta International Airport, the red-eye flight doing nothing to dim our enthusiasm. With one day only to meet potential mobile-network partners and put the finishing touches to our presentation, we were up until late before the conference, being chased to bed by a group of melon-sized mosquitoes that had grown tired of hearing our repeated pitch.

The conference gave us an incredible opportunity to interact with social entrepreneurs from all over the globe as they attempt to solve some of the world’s most pressing social issues—from minimising food wastage with post-harvest coolers to creating potable water with a widely accessible filtering innovation. It concluded with a gala dinner, with judges and participants comparing notes and sharing ideas, and discussing how they planned to take their idea from prototype to product. While Afya Njema didn’t win the overall competition, we were voted by our peers as having the idea most likely to scale. Moreover, through our meetings with local mobile-network partners we were able to validate the benefits and the efficacy of the tool.

No trip to Nairobi is complete without exploring the city, including the David Sheldrick Wildlife Trust where orphaned baby elephants are rehabilitated before being returned to their rightful place in the Masai Mara National Reserve. Watching baby elephants wrestle each other in the mud, we were enamoured by a plucky youngster called Mteto and became proud donor-parents, helping him on his journey back to the wild.

A whirlwind taxi-ride took us to see the elongated tongues of giraffes at the giraffe centre and the fantastic beadwork at the Masai market. In the blink of an eye, we were on our way back home, laden with fantastic memories, trinkets and a couple of exams to prepare for on the return flight… It was a fantastic learning experience and we would like to thank Jesus College for helping to make this opportunity a reality.
A woman boldly goes...—and celebrates a satellite’s landmark birthday

A PhD student-luminary in Jesus College's first cohort of women in 1978 and now a College Honorary Fellow, Dr Belinda Wilkes was appointed Director six years ago of NASA's Chandra X-ray Center at the Smithsonian Astrophysical Observatory—in the “other” Cambridge, USA. Today, she assesses phenomena astonishingly large and far away

Belinda wasn’t always interested in the sky. Many catch the astronomy bug in childhood but, for Belinda, only during A-levels (physics, maths and music) at Wolverhampton Girls’ High School in the early 1970s did study of the planets and beyond seem likely to become a lifelong activity. “The school,” she says—talking to Jesuan News in Cambridge University’s Institute of Astronomy—“was very academic. Because it was for girls, there was no pressure against them doing science. I had a very good physics teacher, plus my father was a mechanical engineer, so I could talk to him …” Belinda did her BSc at St Andrew’s University, then came to Cambridge, one of just five women accepted as Jesus College graduate students in 1978. A year later, women undergraduates arrived for the first time.

“In my first weeks,” Belinda recalls, “I’d met at some point a second-year student in the College bar who said, ‘Look, we’re going to the JCR meeting’. I tagged along. Everyone there was looking at me, asking, ‘What is this woman doing here?’” It was, putting it mildly, a different era. Women could not, at first, really be involved in many College activities. She and a Chemistry PhD student were invited to cox men’s eights for a few weeks, early in the morning. One day, they returned later than usual. The boatman, who’d arrived at the Boathouse, went ballistic. “If our alumni could see this, they would turn in their graves!” Belinda laughs, though the two women were barred from coxing at Jesus. She ended up rowing for Darwin College in a women’s four—coxed by a man. She also earned two half-blues playing for the University women’s squash team.

From the measly-minded to the absolutely gigantic: Belinda’s research is into supermassive black holes. These lie at galaxies’ cores. The black hole’s gravity pulls a lot of material in around the core. As it tries to fall towards the black hole, it gets very hot and incredibly bright: known as an active galaxy or quasar. From a distance, what is mostly seen is the hot material near the core, which outshines the rest of the galaxy. Though based in the US, Belinda works with the Third Cambridge Revised Catalogue of radio sources, examining such sources at any viewing angle. She explains: “The black hole has a disk of accreting material around it and, beyond that, a molecular, torus-like structure. If you look from the edge, through the torus, you don’t see the optical and ultraviolet light. Think of putting a doughnut on a table and placing a marble in the hole. If you look along the table, you can see the edge of the doughnut but you can’t see the marble. If you look from above the table, you can… “The same is true of a quasar. You can see the bright nucleus if you are looking from above, but if you are looking from the side you can’t. You lose the bright, optical light. Most surveys of quasars have, historically, been in the optical: viewed from above. With this radio sample, we find them all, because the low-frequency radio emission is from extended structures that are optically thin, so you can see the quasars from any viewing angle.” Learning about the universe is all about telescopes. Until a few years ago there was the European far-infrared satellite, Herschel. Another near-infrared satellite, Spitzer, was the fourth of NASA’s great observatories. It is still operating but only in a couple of wavebands today—that one is in solar orbit.

Belinda’s leading project, Chandra, is now the world’s premier X-ray telescope, requiring a mirror of a quality that is about 70 times higher than, say, the Hubble Space Telescope mirror. Chandra was launched on the space shuttle Colombia in 1999. “It’s as big as a school bus,” Belinda says. “When Chandra’s previous director chose to retire, I decided to apply for the job. There was a big, international competition, with about half a dozen people on the shortlist, and multiple interviews. The post is time-limited only by the fact that the satellite won’t go on working forever. It was originally a five-year mission but it’s still going strong. Its high spatial resolution is unique, and we’re observing and carrying out excellent science. This year we are enjoying Chandra’s 20th anniversary.”
Indian hand-made treasures

BEN CARTWRIGHT, who completed his PhD in Archaeology and Anthropology at the College in 2015, is Curator at The South Asia Collection Museum in Norwich. He is also one of four authors of *Sahaj: Vernacular Furniture of Gujarat*, a first-of-its-kind book on the traditional everyday furniture of the Indian state.

When I joined The South Asia Collection Museum, a key aim was to make it a centre of excellence for study of the arts and crafts of South Asia. Four years ago, the staff were faced with a dilemma. Central to the collection is a wonderful variety of vernacular furniture pieces from north-west India. These range from large, intricately carved wooden chests, mattress stands, low seats and beds to swing seats, hut chests, blacksmith’s boxes, travelling caskets and medicine boxes.

Yet it was difficult to find detailed information about these fascinating objects. We contacted those who work in the furniture industry and museums in India. The details that came back were scanty and often erroneous, however. There were no dedicated books: written accounts were confined to paragraphs and the odd chapter. No-one had attempted to survey vernacular furniture across north-west India or record the human stories bound up in their crafting and use. The need for research was urgent. Vernacular furniture is becoming rarer in homes in the region and the numbers of craftsmen making it are diminishing. This lack seemed especially odd, given how common books and articles on the textiles and architecture of the region are.

Fast forward to 2019 and The South Asia Collection Museum is celebrating *Sahaj: Vernacular Furniture of Gujarat*, the result of a collaboration with the Design Innovation and Craft Resource Centre, CEPT University (formerly Centre for Environmental Planning and Technology) in Ahmedabad. The term *sahaj* in Gujarati can mean either “inherent” or “intrinsic”, and the book introduces the vernacular furniture that is inherent to, and still made and used throughout, Gujarat. *Sahaj*, the book, was launched to a crowd of thousands as part of the Navratri Festival.

More than 50,000 square kilometres were covered by the fieldwork team, surveying over 2,000 vernacular furniture pieces and associated objects in Gujarati villages, towns and cities, conducting oral-history interviews and taking photos. *Sahaj* contains 398 images, including maps, photographs of furniture, design illustrations and exploded-view drawings. It explores the history of this vernacular furniture from around 1900 to the present, introducing the characteristic furniture types, and providing a summary of changes in the crafting and use of these incredible objects over time.

To find out more about *Sahaj: Vernacular Furniture of Gujarat* or The South Asia Collection, please visit www.thesouthasiacollection.co.uk.

All photos by the author and by co-authors Mitraja Bais, Jay Thakkar and Samruchita Dixit
Cleaner clothes

College Fellow Dr Jim Ajioka is pioneering sustainable methods of dyeing cloth. He's actually a Parasitologist and pursues his academic research at a Department of Pathology laboratory on Tennis Court Road. He's also winning prizes and, it could be said, making a significant 21st-century splash...

It isn’t often that a mix of Himalayan arsenic, *Vogue* magazine and the daughter of a Beatle presents itself for a Cambridge college magazine, but Jim Ajioka is full of surprises. Jesus’s Director of Studies in Medical and Veterinary Sciences is involved in transforming the way clothes are given that has caught the eye of fashion designer Stella McCartney.

Working some years ago with a graduate student on a biosensor for the detection of arsenic in drinking water in southern Nepal, Jim noticed—with his scientist's alertness to water quality—that there was something different about Kathmandu’s Bagmati River: the water, though relatively arsenic-free, was horrible. Why?

One of the country’s biggest problems is effluent from its lively clothes-tanning and dyeing industry. The waste products are just dumped in rivers, making the water, Jim says, “one toxic mess”.

The companies that started making dye were just that: dyeing houses. Today’s dyes are essentially petrochemicals. These are unpleasant—really very dirty—which, in an environmentally aware era, poses a considerable concern to the trillion-dollar clothing and fashion industries.

“We thought we could do better,” Jim explains. “Anyone who’s washed dishes or clothes, then accidentally left them on the side, knows how they get mildew spots on them. Basically, instead of mildew, a form of fungi, we use bacteria…”

Colorifix combines engineered micro-organisms, isolating DNA that creates colour in nature. These micro-organisms are then used to transfer the colour onto a fabric.

“With a couple of fairly simple procedures we make the bacteria just like the mildew, laying it evenly across the fabric: that dyes it. A post-doc in the lab at the time, who’s now CEO of Colorifix, figured out how to do this.”

“The technology,” Ms McCartney has said, “is a real game-changer. There are fewer harmful chemicals and toxins but the biggest achievement is using 10 times less water in the process of dyeing. For me, that can change the industry. That can help the planet we live on.”

The company’s dyeing process is, in effect, a synthetic biological process. Today, the field of synthetic biology is at a crossroads. There is a need to standardise and apply engineering principles, such as modularisation and abstraction, to biological processes around DNA and genetic material: to enable biological engineers to design and connect components without needing to know the underlying manufacturing processes. This should lead to innovation and quality control.

“The Industrial Revolution,” Jim adds (by way of example), “would never have worked unless it had invented things like a standard nut-and-bolt pitch-thread”—as with putting together any kind of machine. With a car, an engine is one component. Then, there are wheels and a chassis: different parts of the build have to be brought together.

“Similarly, with genetics: in my lab here in Cambridge, we are trying to make a system that detects different kinds of biological elements. Another project we’re working on, for instance, is how to make an HIV sensor system that is semi-quantitative. The problem to solve there is what’s needed once a drug regime has been started. What is the viral load? So here, we are working locally with colleagues in Africa to put together something inexpensive to assess and deal with just that.”

In his early 60s, Jim has no plans to retire soon, “not as long as I am compos mentis, and can stagger in and get lunch here in College”. Born in the United States, with émigré Japanese grandparents, Jim is a fervent supporter of all forms of diversity, ethnic and gender diversity in particular. His family background was Buddhist and he is keen to promote balance.

“The field of synthetic biology is at a crossroads.”

Last year, Colorifix took home the innovation gong from the ANDAM (Association Nationale pour le Développement des Arts de la Mode) international fashion awards, announced in Paris: on 29 June, Jim and his two colleagues were pictured in *Vogue*, a first for anyone from (at least) the Ajioka family.

And from 21 April 2018 to 27 January 2019 a dress designed by Stella McCartney from cloth dyed using the Colorifix process featured in the *Fashioned from Nature* exhibition at the Victoria and Albert Museum in London.

“Happy people do good work,” he says. “Happy people outperform unhappy people. So I say to my students, ‘Do music, sport or art or something else, to balance your life.’”
A Choir story

CHARLES RAWLINSON came up to Jesus College in 1952 on a History exhibition and graduated in Law. Greatly inspired by his time in the Choir, he has remained a supporter of all that it now does and tells Jesuan News about his passion for the Chapel’s music-making.

Jesuan News: How did it all start for you at Jesus College?

Charles Rawlinson: When I arrived for the entrance exam in 1951, it was so cold I wasn’t sure it was a good idea to come here at all. But of course I got on with it. As an undergraduate I sang for three years in the Chapel Choir under two gifted organ scholars, Peter Hurford and Richard Lloyd. The experience gave me a lifelong love of English church music, as well as for the cadences of the Book of Common Prayer—still used in the Chapel of Thomas Cranmer’s own College. I might add that I’d started music being taught singing by a wonderful head of music at Canford. It was meeting and hearing the College Choir in the early 1950s that inspired me to plunge in and join, and sing...

JN: What did you do after Cambridge?

CR: I qualified as a chartered accountant in 1958, then, after a period in Canada, joined Morgan Grenfell as a merchant banker in 1962. I stayed all my working life in the City. After retirement I decided to help improve the Choir further and gave a capital sum to Jesus to provide an endowment — this will produce this year a sum of £40,000 — to aid all its musical activities. The idea was hatched under the Mastership of Colin Renfrew, then really began under that of David Crighton, who was only three years in the job before dying, sadly.

JN: What is it about the College and Chapel that has remained so important to you?

CR: The Chapel is the oldest in the University and glorious in itself. I fell in love with it and still am in love with it, and believe strongly to this day that the place is adorned and enhanced by the music made there. I know it’s no exaggeration to say that the Choir is today in the top three or so in Cambridge. Everyone knows King’s and John’s, but so many more are now hearing about Jesus.

I did a great deal of rowing as an undergraduate; the College was often Head of the River in those days. I will only note that there are real connections between singing in a choir and being on the river. You have to watch what everyone else is doing. Everything has to be synchronised. It is total team work.

I have many ongoing pleasant contacts with the College. I was the first member of the Society of St Radegund and love its annual get-together. Of course I attend the Feast of Benefactors, too, and am very happy to know a number of Fellows — most of them, it has to be said, Emeritus.

JN: What has informed your decision to help the Choir over such a long period?

CR: If you can — though it will always depend on your individual circumstances — you should think about donating to a place that has had such a major impact on your life, as Jesus College certainly had on me. It was a friendly place when I was up — quite sporty, too — and is even friendlier now. It has a certain magic to it. Naturally, my benefaction is a very specific one but leaving something in your will, too, as I have, is another mark of the deep effect of that impact. The College is over 500 years old but lives and time studying here are transient. Music is important; the buildings are important. They both carry on and must. But I am certain that helping maintain what really matters here, education, is central to what a Donor gives: and that means investing in people, especially those who might find it hard to afford these days.

JN: And your singing experience all those years ago has been central to this...

CR: Generations of choristers before me and since will have enjoyed the same experience. It is because I want to ensure the continuation of this tradition that I have for many years been so active in helping develop the choral music of Jesus Chapel. The Choirs of Jesus College are one of the treasures of Cambridge and a delight to all who hear them.
A fortnight of musical firsts

Thanks to the generosity of many of its patrons, the Choir enjoyed a highly successful and memorable tour of South Africa in July 2018. Choral Scholar Elizabeth Nightingale (2016) looks back

Our fortnight began in Grahamstown, now called Makhanda, at the National Arts Festival, with two concerts ending in standing ovations. A service in the cathedral featured hymns in four languages, followed by an impromptu dance class from the cathedral’s music intern, Kepadisa Kutlwano. This was rather different from our usual Sunday Eucharists but we left with a passable ability to sing “Shosholoza”, a traditional miners’ song thought of as South Africa’s second national anthem.

During our drive west along Africa’s southern coast, we spent two days in George, between Port Elizabeth and Cape Town, with an outreach morning at Life Community Services, which was quite possibly the first time many Choir members had touched a paintbrush or played volleyball since secondary school.

At a joint concert with a church choir in Thembalethu, we were immediately invited to take off our jackets and feel at home, and to stay for bread and soup after. We had been a little nervous about following their vibrant performance with our Renaissance fare, yet I doubt Palestrina’s “Ascendit Deus” was received with cheering and ovations: appropriately, given the title. Spontaneous dancing broke out at the end and the Desmond Tutu choir would not let us get away without our joining in. Music does have a unique ability to unite people and bring out the best in them.

Then, after repeated requests by flight attendants, we sang “Shosholoza” on the plane to Johannesburg, but unfortunately there was no space on board for our newly acquired dance moves! In Johannesburg, we had a busy five days singing and sightseeing. We sang at a service in Soweto’s Holy Cross Anglican Church, by which point our Xhosa hymn-singing was so effective we were invited to perform the lively four-part arrangement of Peter Philips’ “Sicut Cervus” that we had so carefully rehearsed on those long coach journeys.

Although our tour was very much a “fortnight of firsts”—from seeing elephants and giraffes in the wild for the first time to spontaneous post-concert dancing—it was also one of lasts. As is always the case for our last commitment of the academic year, it was the final time that we all sang together and we bade farewell to many of those graduating. But going on a music tour enables you to experience and discover so much about a country: its history, landmarks, culture, language, and the effect its music has on people. This is what I find unique about being on tour. It leaves with you a holistic image of a place, and I know I am not alone in being intensely glad that I was able to discover South Africa in this way.

For a video showing some of the highlights of the tour, please visit www.jesuscollegechoir.com
FORTHCOMING EVENTS

SATURDAY 15 JUNE 2019
JCCS Buffet Lunch in College. Marquee in the Paddock to support the Jesus boats in the May Bumps

MONDAY 24 JUNE 2019
Annual Dinner of the Society of St Radegund

SATURDAY 29 JUNE 2019
Donors’ Garden Party
Anniversary Dinner for matriculands of 1979, 1989, 1999 and 2009

SATURDAY 14 SEPTEMBER 2019
Postgraduate Reunion (1993-2018)

SATURDAY 28 SEPTEMBER 2019
JCCS AGM and Annual Dinner

SATURDAY 12 OCTOBER 2019
The Fortieth Event

WEDNESDAY 6 NOVEMBER 2019
Fifty Years On Lunch (1969)

MONDAY 11 NOVEMBER 2019
Sixty Years On Lunch (1959)

WEDNESDAY 20 NOVEMBER 2019
Seventy Years On Lunch (1949)

SOME SUMMER CHOIR PERFORMANCES

SATURDAY 11 MAY
Jesus College, Cambridge
Be a Chorister for a Day
Boys aged between six and eight are invited to join the Choristers of Jesus College to experience a day in the life of a chorister.

THURSDAY 4 JULY
Jesus College, Cambridge
The Combined Choirs present a varied concert of sacred and secular music in Jesus Chapel.

SATURDAY 6 JULY
All Saints’ Church, Hundon
The College Choir travels to the beautiful village of Hundon to sing a concert in All Saints’ Church. The concert is entitled “Music for a Summer’s Evening”.

MONDAY 15 JULY
St Albans Cathedral
The Combined Choirs join the choirs of St Albans and Salisbury Cathedrals to give a concert as part of the International Organ Festival.

For further information about these and other performances, please visit www.jesuscollegechoir.com or contact the Choir and Chapel Office on E-mail: choir@jesus.cam.ac.uk or Tel: +44 (0)1223 339699

THREE GIFT IDEAS TO SUPPORT THE VISUAL ARTS AT JESUS COLLEGE

The Jesus College Works of Art Committee is proud to offer:

“Aart for Tomorrow”, a portfolio of 10 original prints specially curated for Jesus College, including works by world-famous artists such as Richard Long RA, Jake and Dinos Chapman, Humphrey Ocean RA, Alison Wilding RA and Cornelia Parker RA. Prices available on request.

A limited-edition silk square scarf designed by Stephen Chambers RA and printed by the Armani silk printers, Maves of Como, featuring the cockerel emblazoned with the College motto and complete with presentation box. £325 inc. VAT

Thirty Years of Contemporary Art: Jesus College, Cambridge 1988-2018 by Joan Bacon and Jim Roseblade is a richly illustrated photographic memoir of three decades of sculpture in the Close biennials at Jesus College and the development of the permanent sculpture collection. £12 plus postage and packing

To purchase, please contact the Development and Alumni Relations Office, Jesus College
Tel: +44 (0)1223 339301 or E-mail: development@jesus.cam.ac.uk