



## Editorial

**Honorary Fellow and former Master, Stuart Laing**

I'm most grateful to the Master and Liz Winter for inviting me to write for this issue of *Pelican in Brief*, and I congratulate them and the College for this lively way of maintaining communication in the Corpus community. I've much enjoyed, and found most interesting, the selection of articles kindly contributed by our Fellows and others. And, from *Pelican in Brief* and also from chats and emails with others in Cambridge, I have been very impressed with the way that the University and the College have adapted to the crisis and kept going with research, teaching and learning.

Sibella and I are spending lockdown in our house in Wiltshire, where we have been living since leaving the Master's Lodge in August nearly two years ago. During lockdown we have begun to think the virus came to force us to focus on the house and garden, somewhat neglected during the twenty years we have owned it but not lived in it. Like many others, we have invented Corona projects; clearing the cellar, growing veg, building compost heaps, etc. Once a fortnight our car (otherwise static) gets an outing to our local Tesco, for us to navigate carefully round the aisles, respecting the two-metre rule. We both have charity trusteeships and other jobs entailing meetings by Zoom or Teams, and like everyone else we use the computer or phone screen to stay in touch with friends and family. Being blessed with good health, we are frustrated by the limitations of what we can do to help others affected by the crisis; I do a round on my bike to deliver prescription medications to people in our village, and Sibella, as a Licensed Lay Minister, supports the Rector in the church's continuing virtual ministry. Overall, we are very fortunate, having access to wide open spaces in the Wiltshire downs for walks to exercise with Jack.



This way of life in the lockdown prompts me to reflect on the effects of distance. In one sense, we dismiss its impact by our virtual meetings and chats, but at the same time this screen interaction emphasises what we are missing; the immediacy of face-to-face contact. We have school teachers in our family, and they remind us of the difficulties and differences in teaching and learning remotely – problems by now familiar to all of you in the University context.

We also think of the less visible effects of extended isolation, particularly for those living on their own. This *Pelican in Brief* issue touches at various points on questions of mental health and stress, including – at a tragic extreme – the sad story of Dr Butts, on his own in a deserted Cambridge during a plague outbreak. As restrictions are lifted, there may be more ways for us to support those who have suffered from our current crisis.

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## **News from the College**

**Professor Pietro Cicuta, Professor of Biological Physics,  
Fellow and Director of Studies in Physics**

What a dramatic six months it has been. Having kept myself out of Addenbrookes for twenty years, I spent five weeks in the neonatal intensive care unit at the end of last year, thankful for the extraordinary care by the NHS of our premature baby (who is now doing well!). I became aware of COVID-19 around Christmas time; my parents had come over from Italy, and we were hearing the news coming out of China, commenting how unthinkable the lockdown of a large city and the loss of freedom would be anywhere in the West.

Early in March, I realised that what was by then happening in Italy would almost certainly happen in other European countries. With a delay of roughly two weeks, there was a similar trend of cases in Spain, Germany and France and soon after in the UK.

I was not surprised when on 20 March the University decided to lock down completely. My thoughts during the week before shutdown were conflicted between the desire to keep everyone safe and infection rates as low as possible, and the desire to do something useful. After all, universities contain a lot of creative people, many of whom are great problem solvers. Shutting down was an extreme reaction; I felt it was not the optimal solution. Researchers were being forced out of their labs when they might have something useful to contribute. Research in the University has only been allowed on projects very strictly related to COVID. Everybody else has had to redefine their work from home.

To encourage people to think creatively I set up an online bulletin system using a software called *Slack*. I defined various initial topics to focus on, and allowed access to all the academics from Cambridge and their collaborators. Very quickly we attracted about one thousand researchers, contributing knowledge and sharing ideas in a structured way. This served, for example, rapidly to coordinate efforts around the ventilator designs that various teams had started thinking about, and also to share instructions on how to make various kinds of cheap masks, and we shared information about modelling approaches for the epidemic. This *Slack* platform is still being actively used across the University.

In addition to focusing on my graduate students and post-docs, I got involved in two new COVID-19 related projects. In a very minor way, I tried to help the open source ventilator [ovsi.org](https://ovsi.org), which was built in the Whittle Laboratory, part of the Department of Engineering. My interest in that project is connected to work that we do with biomedical technology in developing countries. I wanted to see if simple designs could be followed through to produce medical instruments.

I had a more significant involvement in another project, together with Professor Cecilia Mascolo in the Computer Science Laboratory, where the idea was to see if the sounds of voice, coughing and breathing, recorded in a simple way through smartphones, could be enough to diagnose the COVID-19 condition, its severity, and perhaps even distinguish it from other types of airway diseases like the common cold or flu. This project [covid-19-sounds.org](https://covid-19-sounds.org) is going well. We are still in the initial phase of data gathering sound samples and are still looking for more people to join! Having promoted the idea through social media and our personal networks, we also managed to get coverage in the mainstream press. I even appeared on national television. So far 8,000 people have donated their sounds, the largest such data set globally, and we're in the process of seeing to what extent these sounds can be used to diagnose the disease using signal detection and machine learning algorithms. If this project turns out to be successful it could serve as an automated filter, perhaps as part of an NHS 111 response, helping the health system manage the demand for advice, and to work out who should go to hospital and who should safely wait at home.



### Volunteer your voice

The app will collect some voice samples (while you read text on the screen), and a few seconds of breathing and coughing.



### Contribute to science

We need many participants in order to build predictive models and contribute to the early diagnosis of COVID-19.



### No tracking

The app won't be tracking you and it will collect data when you actively interact with it.

The pandemic has already had a huge impact on us, including speeding up, for better or worse, many trends that were perhaps about to happen anyway. By changing our daily life and our habits so suddenly, and by preventing us from doing a whole set of things, it has opened up for some people a window of free time. For me despite being busier than ever, it's given me a chance to consider, with a little bit of detachment, how to use my time and expertise for something immediately useful.

A longer version of this article can be found at <https://softandbio-physics.blogspot.com/>



## Reflections from the Fellowship

**Professor Andrew Harvey, Professor of Econometrics, Life Fellow and previous College President, describes the landscape of stock markets as they face the challenging times of COVID-19.**

During the early part of the coronavirus crisis the newspapers were full of headlines about stock market crashes. From the third week in February until the third week in March, markets fell by about 30 percent. However, large downward movements are often followed by upward movements a few days later. Upward movements are somewhat less newsworthy - we apparently all love stories of doom and gloom - but they point to an important feature of stock markets: they exhibit increasing volatility in times of uncertainty. Big changes are usually a response to news, such as restrictions on movement or a new economic package.

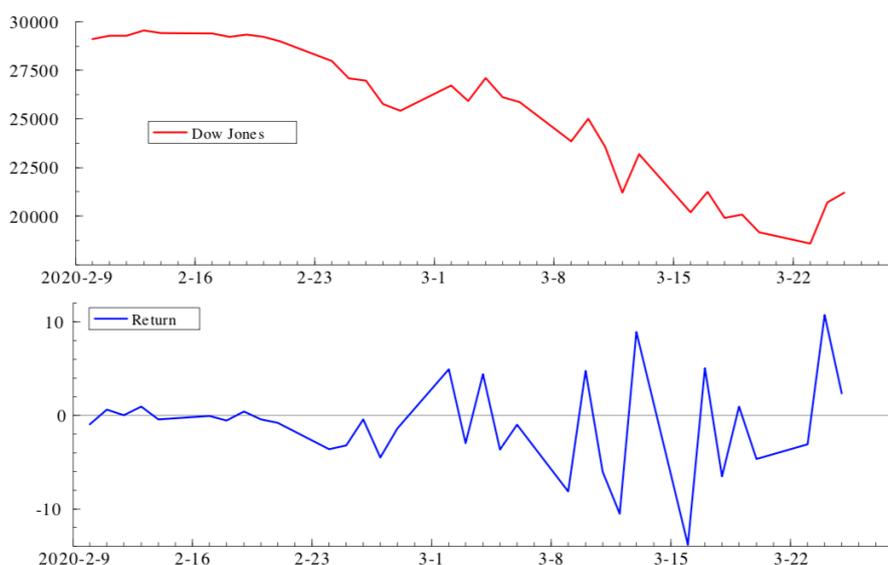


Figure 1: Dow-Jones index and returns in February and March 2020.

Figure 1 shows the daily closing price for the main US index, the Dow-Jones, starting on 9 February and ending on 25 March. Very little happens until the third week in February when the index starts to fall. It then appears to stabilize at the beginning of March but after that there are much larger falls. The corresponding increase in volatility shows up in the lower graph, which plots returns, that is the change in the day divided by index.

The size and direction of stock prices is unpredictable, for the simple reason that, if they were predictable, people would act on this information thereby immediately wiping out any predictability. The same is not true of volatility. If there is uncertainty today it is highly likely that there will be uncertainty tomorrow. There are some exceptions to this rule. For example after 9/11 the Dow-Jones fell sharply but it didn't take long for people to realise that there had been no fundamental effect on the economy and within days it was back to its earlier level. But what of the financial crisis of 2008? This is a much better guide to what we are currently experiencing. Figure 2 shows the Dow-Jones index and returns for the period before and after Lehman Brothers filed for Chapter 11 bankruptcy protection on 15 September. The market fell by 30 percent while volatility exploded but then gradually subsided.

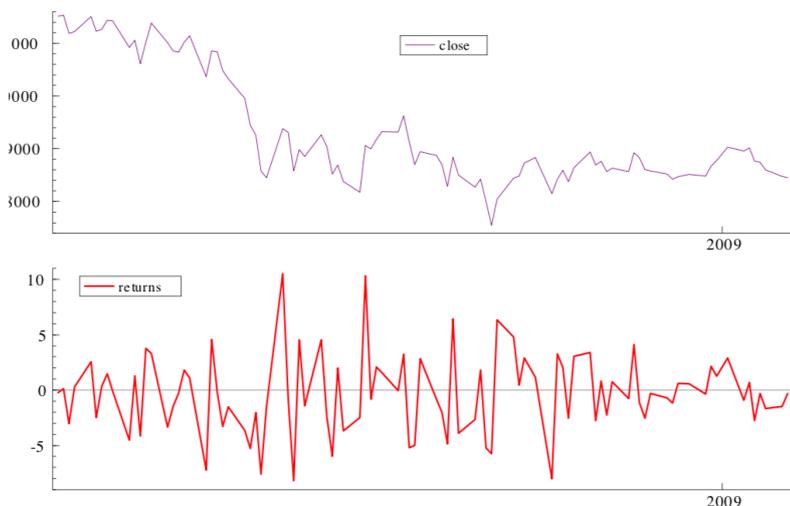


Figure 2: Dow-Jones index (at the close) and returns around the time of the 2008 crash.

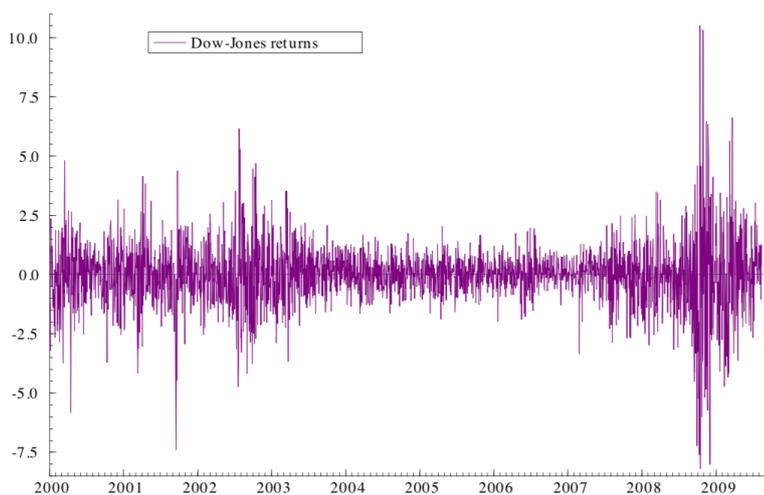
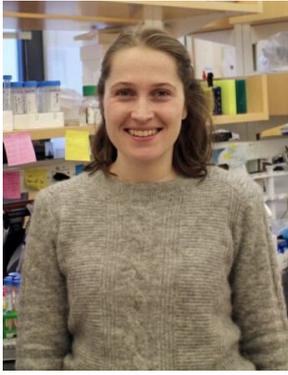


Figure 3: Dow-Jones returns.

Figure 3, which shows the Dow-Jones returns from early 2000 to end of 2009, puts this in a wider historical context. As can be seen, volatility was gradually increasing prior to the Lehman collapse. It was becoming increasingly apparent that something was wrong, but few realised exactly what it was and what the implications were. Of course, some did. (For those of you who are wondering how to pass the time without the delights of Corpus high table, the film *The Big Short* provides an excellent and, in some places, very funny guide to what was happening.) The interesting point about the recent crash is that it was very sudden. We had known about Coronavirus for some time but it was only at the beginning of March that the full economic implications started to become apparent. In contrast to what happened in 2008, the volatility in the weeks prior to the first big fall was low.

What happened next? Well, over the last two months, the markets have recovered much of the ground they lost in March, but of course that hasn't made the headlines. Volatility is down, but it is still on the high side and will remain so until the full implications for the economy start to become clearer. We can then wait for the next unexpected shock and watch as volatility goes up once again: a predictable element in an unpredictable world.



## Student Voices

**Isabella Ferreira (m 2019), Gates Scholar and first-year doctoral research student in Medicine, talks to Somer Ann Greene about adapting her research to support COVID-19 testing.**

'It's the most surreal experience going through something like this, especially at Cambridge.' Isabella Ferreira, Gates Scholar and first-year doctoral research student in Medicine, did not expect her first year at Corpus to look quite like the scene set before her now. Along with around fifty students, Isabella is currently living at Leckhampton and the grounds have revealed some of the most peaceful parts of themselves during this time of quietness – from the songs of new birds to the faces of new flowers. Friendships are also being strengthened: 'The students have formed a sort of survivors group where we all support one another,' she explains.

More than a change of pace and atmosphere however, the direction of Isabella's work has also altered due to COVID-19. She was originally studying infectious diseases, specifically HIV, and how different cells that make up the cellular HIV reservoir interact and become permissive to HIV infection. However, with the urgent need of diagnostic COVID tests, Isabella's research shifted. She now examines immune cell interactions, but in the context of COVID rather than HIV. Working under the supervision of Professor Ravi Gupta, Isabella is a member of the lab that is developing the [widely-praised](#) new '[SAMBA II](#)' test, which can obtain a COVID diagnostic in under 90 minutes. 'I focus on the basic science research, the immune responses behind all this. I look at how to best understand the actual mechanisms and structures before we can apply research.' The SAMBA II test is not only ground-breaking in its ability to detect active infections, but also in that it requires minimal training to employ — increasing access and therefore helping reduce the risk of infection spread.

Isabella is also the MCR Vice-President and her experience in this role has changed as she learns the organisational skills required in a time of crisis. 'Being on the MCR committee and liaising with the College to make sure everyone feels secure has been really rewarding — it's a lot to learn.' From the group residing at Leckhampton, to the international community of postgraduates currently working from home, she observes how relationships have grown stronger since being faced with the unprecedented: 'When I speak with students now, it's like seeing people's raw selves: how they cope with this, seeing what their thresholds are and hearing them be so honest with their feelings has been really amazing.'



She's worked closely with the Senior Tutor and Warden of Leckhampton as well, ensuring that Leckhampton remains an encouraging place in the middle of a difficult time. 'It's been very constructive to discuss outcomes with the College and see how working relationships develop when you open channels of communication to ensure support. We're all collectively trying to make the best scenario for those who remain in residence.'

Looking to the future, she summarises the positive things the pandemic brought. She has hopes her research can 'further uncover ways global health reacts to infectious diseases that affect certain parts of a population,' and as Vice-President, she and the MCR committee have used this moment as a gateway for further connection among students and staff. 'This has taught me about leadership, crisis management and how to communicate with different parties. I think that's a really amazing skill I'm starting to gain from this.'

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## **Reflections from the Staff**

**College Nurse Sarah Winder-Worsley explains what it is like to support students and what they experience during COVID-19.**

I've been nursing for twenty years now both in the UK and Canada and last June saw me joining the Corpus family, looking to take my nursing career in a new and exciting direction. The challenge laid down, which I gladly accepted, was to set up a College Nurse service to support and promote the health of all Corpus students. I began with a small ex-guest room in New Court and a computer. By September, just before the start of the Michaelmas term, the bedroom had been transformed into a clinic, complete with treatment couch, diagnostic equipment and a substantial selection of medical supplies for treating a wide range of minor illnesses and injuries.

There are well-established college nurses at twenty-five of the Cambridge colleges and there are many opportunities for sharing best practice, but no two services are identical. An effective nurse practice should be structured around the needs of the intended population. One of my first tasks was to learn about the health needs of my new student population so I invited them to share their medical history via a confidential questionnaire. Their fantastic response to this helped to prepare me for providing the right support and advice when they have needed it.

It's not unusual for students to arrive in Cambridge with additional needs as a result of ill health and an important part of my role is to reduce the impact of chronic ill health on their Cambridge experience. Of course, acute ill health also strikes regularly, including mental illness such as anxiety and depression, so my clinics are always varied and I spend a good deal of time signposting students to the services best suited to help them.

At the beginning of the Michaelmas Term, I decided to highlight my presence in College by giving each student a free bottle of hand sanitizer – after all flu season was almost upon us! Little did I realise what a valuable commodity it was to become. By the beginning of the Lent Term, increasingly loud rumblings were to be heard, warning of the potential impact the newly discovered virus in China might have on our international community. As the term progressed, so did the passage of the virus and with two weeks still to go, we made, in consultation with the wider collegiate University, the difficult decision to ask our students to return home. Most have been able to go, but we currently have some sixty students still resident in College, the majority from the postgraduate population living at Leckhampton.

The College is now closed and with the national lockdown, only a skeleton staff of essential workers remain onsite. However, I am still supporting students remotely via telephone calls and online meeting platforms. Over the Easter vacation, my focus has been largely on the students who remained in residence, but as the Easter Term began, I continued to be available to the student community wherever they are in the world. All appointments will be carried out remotely for the time being, and these can be booked on my Moodle site. The students face a challenging term, adapting to new living arrangements and methods of assessment, but I encourage any who are struggling to get in touch – support is most definitely still available!





## Observations from the Past

**Dr Philippa Hoskin, Gaylord and Dorothy Donnelley Fellow Librarian, reflects on the life of Henry Butts, Corpus Master 1626–1632, and his turmoil during the time of the Plague.**

Henry Butts, Master between 1626 and 1632, is remembered as one of the most unfortunate of masters. As was usual at the time, Henry Butts also served as Vice-Chancellor for part of his Mastership and so, when Bubonic plague came to Cambridge in April 1630, he found himself needing to manage a huge crisis on behalf of the University. As formal University teaching ceased, and the vast majority of students and fellows fled the town to places they hoped were safer, Butts stayed in Cambridge, working alongside the civic authorities, to deal with the immediate problem of containing the epidemic, relieving the suffering of the sick and supporting those who had lost their livelihoods. University records show strategies for containing infectious disease that are still familiar to us: infected households were required to self-isolate, gatherings of people were banned, and the pubs were closed.

In this period Butts remained living in the Master's Lodge, 'alone ... a destitute and forsaken man, not a scholar with me in the College, not a scholar seen by me without'.



This image of a solitary man, struggling to live with memories of terrible suffering has tended to influence popular interpretations of Butts's suicide on Easter day 1632 when, having failed to turn up to preach at Great St Mary's, he was found hanged in his room in the Master's Lodge. Although there are reports that during the crisis he was in poor health and behaving oddly, Butts had many other subsequent worries. Contemporaries and historians have suggested various reasons for his despair including that he suffered overwhelming shame arising from some part of his conduct as Vice-Chancellor: financial misconduct, the granting of honorary degrees to people who were not properly qualified, and the mishandling of the entertainments for a royal visit to Cambridge in 1632.

A contemporary Catholic polemicist even suggested the heart of the problem was Butts's belief in the Protestant doctrine of predestination, asserting that such beliefs would inexorably draw people to suicidal despair.

Exactly what troubled Henry Butts so much we will never know, and we know only a limited amount about Corpus at this period since the College chapter book for the period has long been lost. We know much more about his actions as Vice-Chancellor from University records preserved in the University Library. A picture of Henry Butts, painted in happier times shortly after he became Master, hangs in the OCR.

*Image: Henry Butts (d 1632), Master (1626–1632).*

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## New Fellows

**Dr Rory Naismith, Fellow in Anglo-Saxon, Norse and Celtic, and Lecturer in the History of England before the Norman Conquest, Department of Anglo-Saxon, Norse and Celtic.**

Rory Naismith is returning to Cambridge after four years lecturing in the Department of History at King's College London.

Before that, he was an undergraduate and graduate student in Anglo-Saxon, Norse and Celtic at Trinity College, Cambridge (2002–2009), and subsequently pursued postdoctoral research in ASNC, History and at the Fitzwilliam Museum while based at Clare College (2009–2015).

His research focuses on economic and social developments in Anglo-Saxon England. He is interested in the cross-fertilisation of material and written sources and has worked particularly closely with coinage. At present he is preparing a major study of the social impact of monetisation in early medieval England and its neighbours, to be published by Princeton University Press. He has also recently written about the development of Anglo-Saxon London, early medieval guilds and the land market in Anglo-Saxon England. He currently lives in Cambridge with his wife and daughter.

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## Next term in Cambridge

**Joint letter from all Cambridge College heads of house published in *The Times* on 22 May.**

As heads of Cambridge colleges we have been concerned in recent days to see headlines around the world making the claim that Cambridge will be moving entirely online next year. These claims have caused unnecessary alarm to students and our wider community. We are a collegiate university, and our strength is that so much student activity takes place in colleges, from small group teaching and pastoral care to music and sport.



We will always take the latest public health advice and clearly there will be challenges in providing all this in the next academic year. Online lectures will make a key contribution. But we are determined to do our best to bring the colleges and the university back to life with intensive in-person learning in the traditional locations and the widest possible range of activities.

*Jane Stapleton, Master, Christ's College; Athene Donald, Master, Churchill College; Anthony Grabiner, Master, Clare College; David Ibbetson, President, Clare Hall; Christopher Kelly, Master, Corpus Christi College; Mary Fowler, Master, Darwin College; Alan Bookbinder, Master, Downing College; Fiona Reynolds, Master, Emmanuel College; Sally Morgan, Master, Fitzwilliam College; Susan Smith, Mistress, Girton College; Pippa Rogerson, Master, Gonville & Caius College; Geoff Ward, Principal, Homerton College; Anthony Freeling, President, Hughes Hall; Sonita Alleyne, Master, Jesus College; Michael Proctor, Provost, King's College; Madeleine Atkins, President, Lucy Cavendish College; Rowan Williams, Master, Magdalene College; Barbara Stocking, President, Murray Edwards College; Alison Rose, Principal, Newnham College; Chris Smith, Master, Pembroke College; Bridget Kendall, Master, Peterhouse; John Eatwell, President, Queens' College; David Yates, Warden, Robinson College; Mark Welland, Master, St Catharine's College; Catherine Arnold, Master, St Edmund's College; Tim Whitmarsh, Vice-Master, St John's College; Roger Mosey, Master, Selwyn College; Richard Penty, Master, Sidney Sussex College; Sally Davies, Master, Trinity College; Daniel Tyler, acting Vice-Master, Trinity Hall; Jane Clarke, President, Wolfson College; Michael Volland, Principal, Ridley Hall.*

Published: 22 May 2020

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*Pelican in Brief* is available on our website and all issues can be found [here](#).

The next issue will be published on 11 June.

For further information, please visit our website [www.corpus.cam.ac.uk](http://www.corpus.cam.ac.uk) or contact

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