APRIL 25/26 2020 FT Weekend Magazine

How China struggled to control the virus - and the narrative. By Don Weinland

WUHAN



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'The room is filled with the billion-voiced shriek of the rainforest at night'

William Atkins meets those tasked with protecting the British Library's unique sound archive, p24



'Fudgy, nutty and crumbly' Honey & Co's bunker food, p34

On the cover: Wang Xinghuan, president of the emergency field hospital Leishenshan in Wuhan, talks to the media on April 14 after the final four patients in its intensive care unit tested negative for coronavirus



'I find myself longing to push through the door of the Q train with a hundred other people'

Siri Hustvedt on New York in lockdown, p20

FT Weekend Magazine

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The British Library's National Sound Archive has more than 6.5 million recordings, but with many made from delicate materials on nowobsolete equipment, the race is on to keep them from being silenced. By *William Atkins*

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As a catastrophiser who spent the past few years writing a book on surviving the end of the world, *Mark O'Connell* has found society's ability to join together in the face of a deadly viral pandemic a reassuring surprise

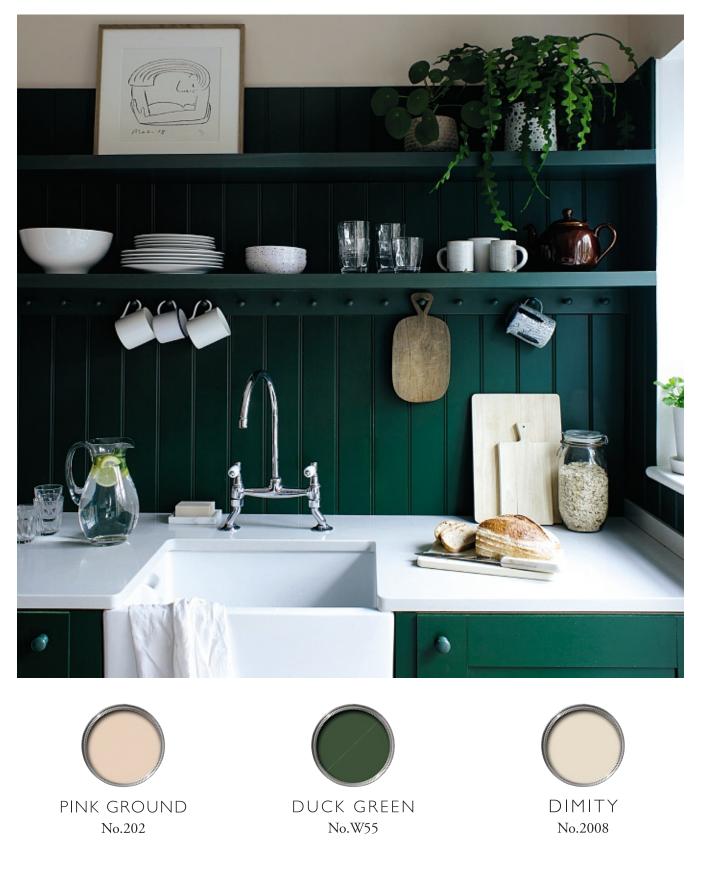
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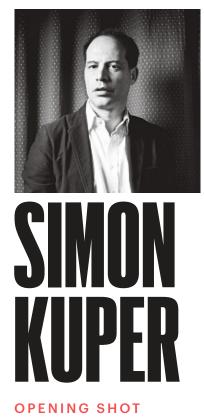
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It's harder to stay sane without sport



everybody. Sports worldwide have stopped for the pandemic. That obviously isn't the biggest mental-health risk around right now. The French scholar Émile Durkheim showed in Suicide (1897) - one of the first serious sociological studies of almost anything - that when people experienced a sudden change in circumstances, some took their own lives. He was thinking of changes such as divorce, a partner's death or a financial crisis, but the current lockdown is a sudden change for everyone, bringing mass unemployment and unprecedented physical isolation. Moreover, we're now entering a lethal season: suicides in the northern hemisphere typically peak in May and June. The pausing of professional sports might seem an irrelevance in comparison. Yet it matters. Some sports fans have lost the only community they had. How will they cope?

For many, fandom is just an excuse to gather with others. Borja García of Loughborough University says that when his team of researchers asked supporters around Europe to document what football meant in their everyday lives, almost 90 per cent of the thousand photographs that people sent didn't show any match action. "Instead, we saw bus interiors on the way to an away game, minute preparations before taking a child to the stadium, pre-match excitement in the stands."

Watching a game in the stadium, or on TV with friends, you can lose your individuality and merge into a group. It's almost a pre-Enlightenment experience. "Anything that can take us away from a preoccupation with our pathetic selves is an emancipation," says Chris Oakley, a London psychoanalyst who wrote *Football Delirium*. He adds that when fans celebrate in the stands, they can shed restraint and enjoy a "manageable dose of madness". Even defeat is an opportunity to share emotions with others.

In some families, the only tension-free topic of conversation is the team they all support. But the beauty of fandom, especially for certain men, is that conversation isn't even required. You can just be together.

Shared fandom can connect the most incompatible people. One night during the presidential campaign of 1968, Thompson took a limousine journey through New Hampshire with the Republican candidate Richard Nixon, and they talked football non-stop in the backseat. "It was a very weird trip," Thompson reflected later, "probably one of the weirdest things I've ever done, and especially weird because both Nixon and I enjoyed it... Whatever else might be said about Nixon – and there is still serious doubt in my mind that he could pass for Human – he is a goddamn stone fanatic on every fact of pro football."

Then there are the reassuring rituals of following your team from childhood to grave. "I have measured out my life in Arsenal fixtures," wrote Nick Hornby in *Fever Pitch*. Everything else changes – people divorce, move away, grow old, die – but if you're lucky, your team will always be there for you.

'Communal habits, from religion to pub-going, had been waning for decades. Now coronavirus has all but erased them'

Fandom also enriches our lives with glimpses of greatness. The accessible genius of Roger Federer or Simone Biles shows us the best of what humans can do. It beats reading the daily mortality numbers.

There is statistical evidence of sport's benefits to mental health. Thomas Joiner of Florida State University discovered that suicides in the US decline in towns where a local sports team reaches the play-offs, and drop nationwide on Super Bowl Sunday, probably because fans gain connection from watching together. Stefan Szymanski and I showed a similar effect in European football in our book *Soccernomics*: suicides in a country decline when its national team play in a World Cup or European Championship.

Almost all our communal habits, from religion to pub-going, had been waning for decades. Now coronavirus has all but erased them. No wonder people worldwide have immediately conceived a new communal ritual, the ovations for health workers. We probably do this more for ourselves than for them.

A few people are now going to bizarre lengths to hang on to sport. A man who has watched football in almost every country on earth recently sent Oakley a picture of himself sitting alone, wearing a mask, in the stands in Belarus, the only European country where the league continues.

Others have sustained their sporting communities in virtual form. Footballers at clubs such as Norwich City have been ringing around older supporters to chat and see if anyone needs help. Oakley reports heavy traffic on his WhatsApp groups of Spurs fans, most of whom proclaim themselves delighted that their team's dreadful season is over for now.

Social media is usually cast as a problem. For sports fans - and others now seeking community - it can be the solution. **FT**

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INVENTORY NOEL FITZPATRICK VETERINARY SURGEON

'Animals have a right to the planet too'

Veterinary surgeon Professor Noel Fitzpatrick, 52, has appeared in the BBC's *The Bionic Vet* and Channel 4's *The Supervet*.

What was your childhood or earliest ambition?

To make a meaningful difference to the lives of animals. I wanted to fly around the world as Vetman, fixing them all.

Private school or state school? University or straight into work? State school - Ballyfin College. University College Dublin.

Who was or still is your mentor? Brother Maurice, my physics teacher, showed me that, with science, many things are possible. My veterinary mentors taught me that, if you know anatomy well enough, most things are possible. Philip Gilbert, my Lamda drama teacher, taught me that, if you know your lines, everything is possible. The animals are my greatest mentors every day and, as an Irish farmer called Larry once taught me, everything is impossible, until it happens. How physically fit are you? I was doing pretty well until I broke my neck a few weeks ago. Ambition or talent: which matters more to success?

Ambition, by a mile. Anything worth having is worth working for. **How politically committed are you?**

I'm committed to animals, who don't have politics.

What would you like to own that you don't currently possess? Our oncology centre needs a linear accelerator – a machine that cuts out cancer using a "cyber scalpel". What is your biggest

extravagance?

I once owned an Aston Martin. I sold it so I could employ a veterinary resident who still works here. Susan is now a qualified surgical specialist - she's worth a thousand Astons. **In what place are you happiest?** In the operating theatre is where I am most at peace.

What ambitions do you still have? I founded a charity, the Humanimal Trust, to give animals a fair deal and bridge the divide between human and animal medicine. We live on one planet and we should have one medicine.

What drives you on? I want to explain the value of creating one field of medicine, for animals and humans, to the medical profession, regulatory bodies, governments and drug manufacturers. We should fund projects to study prostate cancer, coronavirus infection and arthritis in animals and humans side by side.

What is the greatest achievement of your life so far?

Building Fitzpatrick Referrals animal hospital. Bank loans can buy buildings and equipment but they cannot buy hearts and souls. I am intensely proud of all 250 of my colleagues.

What do you find most irritating in other people?

Lack of integrity. Commitment is doing something you said you would do, long after the mood in which you said it has left you.

If your 20-year-old self could see you now, what would he think? That I had wasted time and could have achieved more.

Which object that you've lost do you wish you still had?

The copy of *De Profundis* by Oscar Wilde I had as a child. It allowed me to learn to read and write. I hid it in a shed from bullies. Its light was extinguished when they trampled it into the mud. **What is the greatest**

challenge of our time?

Finding a way to maintain the quality of life for humanity, while accepting that animals have a right to the planet too. If we don't learn how to curtail global warming, pandemics and the loss of ecosystems, nature will destroy us. Do you believe in an afterlife? I believe we are all one - that we come from one universal source of being which, before the Big Bang, was the harmonic symphony of space-time foam described by superstring theory. I believe that this is reflected within every one of us as pure consciousness. This transcends intelligence. Our sense of oneness needs awakening. A more compassionate, respectful society after the corona crisis is the kind of afterlife I'd like to see. If you had to rate your

If you had to rate your satisfaction with your life so far, out of 10, what would you score? One. I've only just begun.

Interview by Hester Lacey. Series one of "Animal People", the first podcast from Noel Fitzpatrick, is available on all main podcast platforms



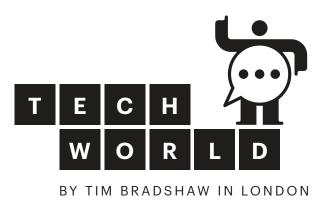
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What Zoom should have learnt from Chatroulette

t had been another long day of jumping from one video call to the next, when suddenly a stranger appeared on my screen.

I saw my own face recoil as it became apparent that my interlocutor was disrobing. Before the full reveal, I managed to hang up. Another narrow escape from the hazards of an unprotected webcam.

This was not an episode of "Zoombombing" - of which there have been many recently, as gatecrashers invade conference calls on the favoured video app of quarantined office workers. In fact, it happened a decade ago, when I had my first brush with internet-enabled indecent exposure courtesy of Chatroulette - the original live video site.

Back in 2010, Chatroulette went from a "viral" (when we could still use that word) teenage programmer's phenomenon to internet notoriety in a matter of weeks. Who could have predicted that randomly pairing the webcams of two anonymous strangers, without any kind of registration or moderation, would be hijacked by flashers and amateur pornographers?

Chatroulette's widely documented "penis problem" should have taught every tech company a few lessons about the risks of live online broadcasting. But, in the intervening years, some of the most popular social networks and video apps - Facebook, YouTube, Twitch and now Zoom have been shamed over and over again by the impossible task of policing a live video feed that can be created by anyone, anytime



ILLUSTRATION BY PÂTÉ

and anywhere. These companies - among the world's most valuable have been unable to prevent abuse, whether it's the Zoombombing of remote classrooms or the livestreaming of terrorist attacks.

The risks have not stopped millions of us from turning to Zoom, Houseparty, FaceTime and other video apps in recent weeks, as we try to maintain our social lives at a distance. Not since BlackBerry's heyday has a business tool crossed over to mass-market popularity like Zoom. While the company has faced justifiable scrutiny for various security and privacy missteps, we ought also to marvel that Zoom has kept working at all, given its daily usage jumped from 10 million people to 200 million in just three months.

However, there is one industry veteran who is doubtful that

'Chatroulette is rarely boring. On a recent 10-minute visit, I encountered four faceless naked men, one racist rant and an unusual conversation with a driver in Germany' all these live video apps will sustain their current appeal after lockdowns are lifted: the founder of Chatroulette.

"I don't think the internet is all it's cracked up to be," Andrey Ternovskiy tells me via Skype. "In the sense that it's still secondgrade stuff compared to real life." Ternovskiy, who was just 17 when he launched the site, has kept Chatroulette going single-handedly for most of the past decade. Recent weeks have brought a resurgence in users, though audiences remain far below the one million people a day who visited in 2010.

Despite the introduction of a "filtered" mode that promises "safe chat" and an optional blurring mechanism to mask unexpected nudity, Chatroulette's penis problem remains unsolved. After so long trying to tackle the issue, Ternovskiy is now resigned to it.

"It's constantly going to be a problem," he says, when a large enough number of people join any online community. "If you have a system where everyone meets everyone, it's kind of like corona. If it wasn't the d**ks, it would be something else... If you leave a door open on the internet, someone will barge in."

Some online set-ups have been able to contain abuse, he says, pointing to eBay's star ratings and certain cryptocurrency systems. But these days, Chatroulette's founder is more excited about networking in virtual reality than video chat rooms. "In VR, I did have that kind of 'wow' moment," he says. "When I use it, I get this magical sense of being there... It's just boring to spend the whole day engaged in video conferencing."

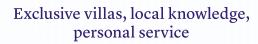
Chatroulette is many things, but it is rarely boring. On a recent 10-minute visit, I encountered four faceless naked men, one racist rant and an unusual conversation with a driver in Germany. From behind the wheel, with his yellow air freshener dangling in front of his smartphone camera, my new pal told me he was skipping curfew to meet a friend in a park.

"We just couldn't stand it any more, to sit at home all day long," he told me, unable to tear himself away from his video app even as he escaped lockdown.

Tim Bradshaw is the FT's global technology correspondent



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ROBERT SHRIMSLEY THE NATIONAL CONVERSATION

A guide to my new noninformation strategy

hat time's dinner?" ask the spawn, wandering into the kitchen after a hard day's computing. "I'm not at the point where it is helpful to discuss dinner," I reply, adding that, at this stage, my focus is on staying home and saving lives. "It is, I'm afraid, just too early to talk about it."

"But it's 6.30," they protest. "Surely you must know what time we are eating." I stonewall. "OK then, if you can't tell us when we are eating, can you tell us what we are eating?" But I'm sticking to the message. "Look, I just don't want any distractions at this point. If I tell you what you are eating, you will only get hungry and then you might snack. I need everyone to focus on staying home, protecting the NHS and saving lives."

"But you must have a dinner strategy," they persist. "Can you at least confirm that?" I am unmoved. "Listen," I say, "discussions take place on a regular basis between your mother and me about the options, but discussing them is a distraction and we are not yet ready to whet your appetite." "You are treating us like children," they complain. "Not at all," I reply. "Next question."

They try to goad me. "You don't have the authority to plan dinner. You are just an interim cook and waiting for Mum to come down." But I'm ready for this. "I have complete authority over this repast. I am fully empowered to oversee this mealtime, working on the plans set down by your mother before she went upstairs. Rest assured; we will at all times be guided by the science."

By now, they are staring at me sceptically: "You don't actually have a plan for dinner at all, do you? We bet you haven't even got enough food to cook." There is, I assure them, no threat to supplies. We have even appointed a meal tsar to



ILLUSTRATION BY LUCAS VARELA

On this week's Culture Call, we speak to Esther Perel, psychotherapist and host

of the podcast Where Shall We Begin?, about strategies for coping with lockdown

- and the importance of finding pleasure where we can; ft.com/culture-call

take personal charge of the dinnerimplementation logistics. "You mean we're getting Deliveroo," they say. I consider explaining my fivepillar strategy to secure four meals by the end of the evening but this will only lead to more questions.

This conversation, you may by now have realised, errs on the side of fiction. But I am very taken with the government's new non-information strategy practised especially by the health secretary Matt Hancock - as a methodology for tackling future household questions, particularly when there are only options rather than definite outcomes. Hancock and other ministers have stuck firmly to the formula that discussing the lockdown strategies they don't have will only encourage people to break free from their constraints in anticipation of the non-existent plan. From now on, I can see a domestic role for the Hancock conversational gambit.

Take requests for more pocket money or one-off grants. "Well, look, the pocket money does exist and there is a plan for its payment. I am being guided by the science on this and our committee of experts, otherwise known as Tanya Byron. Several dozen shipments of pocket money have already been made. At this stage, I am focused on getting the pocket money to where it needs to be. We are not yet ready to speculate on future increases, which might encourage you to spend money you don't have, forcing you to access one of our emergency liquidity schemes."

Or the inevitable holidaydestination disputes. "I understand your desire to know, but the truth is it would be premature to discuss this because we are not yet actually at the airport. There will be time to discuss this once we are at check-in, or through security, or possibly on the plane, but speculation about our port of call will distract from the normal daily life of homework, chores and staying safe and saving lives."

There are those who argue that this approach is somewhat infantilising and that refusing to discuss important household decisions before they are taken is treating my family like children. I do recognise this argument but, frankly, in these challenging times, no good will come of pressing me for answers I don't have.

All you need to know is that I am focused on the challenge in front of me and that I will, at all times, be guided by the science. robert.shrimsley@ft.com ↓ @robertshrimsley Reply

Tim Harford's "Why we fail to prepare for disasters" (April 18/19) was excellent, thank you very much. A further complication for a solid preparedness is that global crises require global, co-ordinated reactions, which the current wave of nationalism makes impossible. **Ignacio343** via FT.com

@alexyakovlevncl April 18 Highly recommend @TimHarford's piece. No conspiracy theories or metaphysics... Just human psychology, crowd-enhanced insensitivity to risk, distance between powerful and ordinary

.....

Re "The highs and lows of a skyscraper king" (April 18/19). Great reporting about NYC but also about inequality, loss of light and the people who own a piece of the world's greatest city but do not live here or contribute anything other than making it more and more unliveable. The people who buy these units effectively raise the price of everything. If Bob Dylan was 19 today and wanted to come here to sing, he would not be able to afford it. **Alan** *via FT.com*

The first time I visited Japan I was surprised by how they seemed to have missed the internet revolution ("How the coronavirus exposed Japan's low-tech blind spot", April 18/19). Sure, there was cool technology like bullet trains, and mundane things like hotel doors and vending machines were beautifully engineered, but finding WiFi was a nightmare. In the office, there was paper everywhere – no one had a laptop. I found Japan futuristic but in a 1980s sort of way. **Thought4TheDay** *via FT.com*

I love Miranda July ("We are all lonely and alone and trying to connect", April 18/19). She is on a different wavelength but brilliant if you can connect with her worldview. **Dackle** *via FT.com*

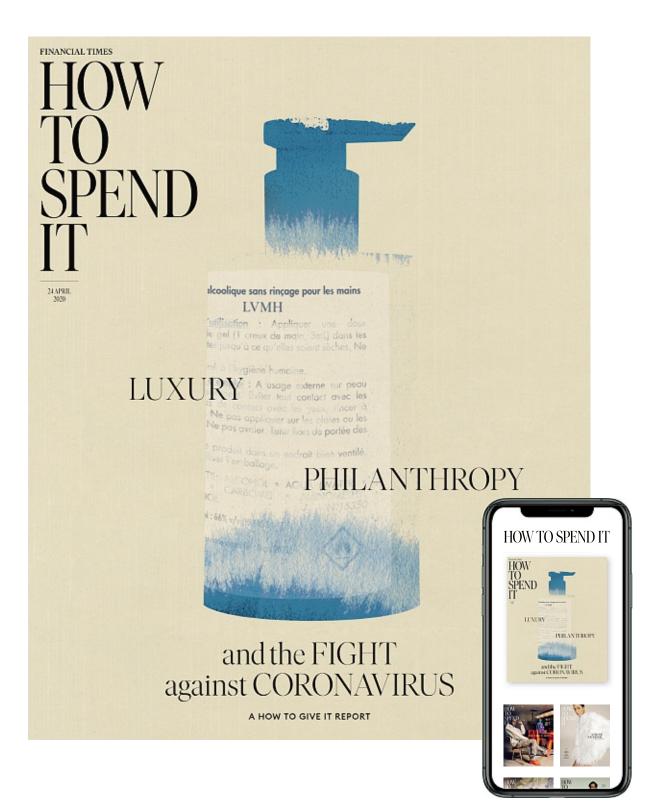
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INSIDE

WUHAN

As the metropolis where the deadly coronavirus outbreak began reopens, China is keen to portray a shaken city slowly returning to normal. But many of its residents still have questions about what really happened – and how it was handled by the government. Don Weinland reports



A Didi driver (China's equivalent of Uber) in Wuhan this month. During the coronavirus outbreak, the service was only available to medical staff. The pictures for this article were taken by a photographer who wishes to remain anonymous



Three girls sit on a bench at Hankou riverbank park on April 9 after the lockdown on Wuhan was lifted

seemingly endless line of masked patients fills a crowded hospital corridor. The sick are bundled in heavy coats and scarves in the icy, fluorescent light as they wait to see a nurse or doctor. These photographs, stealthily taken on Hao Jun's

mobile phone, are a silent record of the crisis the engulfed Wuhan just two months ago.

Sitting with Hao under a camphor tree on a warm spring day in the city's Liberation Park last week, the images feel almost unreal. On April 8, Wuhan was liberated after a 76-day quarantine that had trapped 11 million residents within its boundaries. Now, fields of wild flowers have bloomed across the park and a few visitors stroll through the sycamores. But the pain of two months ago never seems far from Hao's mind. From early February, he - like most residents in the city - was surrounded by affliction and death. He spent days accompanying family and friends to hospitals in search of beds and medicine. Most eventually recovered but several died of the virus, among the more than 3,800 fatal cases in Wuhan. Throughout the chaos of the outbreak that started in late January, Hao spent hours secretly taking photos, keeping a citizen's record of what he described to me as "disorder" and "madness".

Hao, in his late forties, is one of a small but tightknit group of dissidents based in Wuhan who took it upon themselves to document the earliest days of coronavirus, a period that has become a closely guarded secret by China's Communist party.

The city, a sprawling metropolis at the heart of central China, is ground zero for the outbreak now sweeping the planet, with 2.5 million infected globally and 165,000 dead at the time of going to press. Many scientists suspect the disease may have been first transmitted to humans in a local wet market, where wildlife such as bats – which can host highly transmissible viruses – were once sold as a delicacy.

Wuhan's place at the geographic centre of the country and at a number of key junctures in history has also made it a hub of political awareness. It hosts some of China's top universities and, over the years, has gained a reputation as an outpost for dissidents, who have faced increased government surveillance since the outbreak began.

Even so, Hao's willingness to speak frankly about gross mismanagement of the disease by the Communist party puts him in a tiny cohort. Local officials are accused of not only reacting slowly in late December, but also of aggressively silencing those who tried to raise concerns early on. Many people who watched loved ones overcome by the illness have felt deep anger and frustration. Wuhan's official death count was revised upward last week by more than 50 per cent, vindicating those who argue that the state under-reported the number of deaths. Many experts still question whether the official data is accurate. Office workers, state employees and dissidents alike have asked why their lives were so suddenly upended by the outbreak - and whether there was a better way of handling it.

"Of course it could have been different," says Hao, who notes that his activities are monitored closely by the local police and has asked to use a pseudonym. "Different leaders could have done things differently. They would have protected the people instead of just protecting themselves... We [record what's happening] because this is the only way people can know what the real situation is. We have to do this ourselves because you cannot rely on the government news."

I return to my hotel room in central Wuhan to find a package from the local government waiting for me. They have sent foreign journalists two large bottles of hand sanitiser, 20 masks and a 55-page comic book dedicated to sanitation. In one cartoon, a grinning bottle of ethyl alcohol reminds readers to wipe down their phones up to four times a day.

But the main item in the care package is a hastily bound white booklet with a cover that reads simply: *The Chinese Way*. Most of the content is a

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People taking the commuter ferry across the Yangtze river on April 19

selection of state-media stories about the pandemic, in seemingly random date order. But it also includes a carefully curated timeline of the crisis in China – a window into the Communist party's construction of its narrative around the outbreak.

The story begins on an unspecified date in late December when Wuhan's Centre for Disease Control detects "cases of pneumonia of an unknown cause". By January 7, President Xi Jinping has given instructions on responding to the oncoming epidemic. On January 20, a veteran doctor warns the country of human-to-human contagion, while the first patients – an elderly man surnamed Wan and his wife – are successfully discharged from the hospital. In February, the official timeline has Chinese experts and officials spreading their knowledge across the globe, advising Estonia on the 17th and briefing the crown prince of Abu Dhabi on the 25th.

As fear and contagion began to run wild in the US and Europe in March, the booklet suggests that China's story was drawing to a neat conclusion. The entry for March 24 says: "Xi stressed that the international community has already recognised that China made enormous sacrifices in the fight against Covid-19 and bought precious time for the world."

But the omissions in the document are often more telling than the official timeline itself. *The Chinese Way* makes no mention of Dr Li Wenliang, the national hero of the epidemic. On December 30, Li raised an early alarm when his hospital in Wuhan began seeing patients with a Sars-like strain of pneumonia. In a chat group among physicians, he advised them to protect themselves from the virus. Days later, Li was summoned to the local Public Security Bureau and forced to sign a document admitting that he had made false statements that disturbed the public order. Many experts have argued that these early attempts to cover up the outbreak and silence Li may have prevented coronavirus from being contained to just a few Wuhan hospitals.

Also absent from the official timeline is an entry for Li's death. He died of coronavirus on February 7: the image of his masked visage became a symbol of a government cover-up and the poorly managed response in the first weeks of the outbreak, long before the virus had spread widely elsewhere. In some drawings of Li shared online, his surgical mask has been replaced with barbed wire.

Despite the government's initial censure of Li, after his death his image was quickly co-opted by the party as a model of selflessness and a representative of the doctors working on the frontlines in Wuhan - a motif that is still being employed. Meanwhile, other images of Li have been scrubbed from Chinese social media, deemed too sensitive to be allowed to propagate in the country's often unruly online circles. ► STEERING QUESTIONS AWAY FROM THE ORIGINS AND EARLY DAYS OF THE OUTBREAK, THE MESSAGE IS ONE OF A RETURN TO NORMALITY IN THE SHAKEN CITY ▲ Ai Fen, the head doctor at a hospital in Wuhan and one of Li's colleagues, confirmed to a Chinese publication in March that there had indeed been a local government effort to limit public discussion of the outbreak in January. In an interview titled "The One Who Hands Out the Whistles", which was quickly removed from the publication's website, Ai said: "Had I known the situation would be like it is today, I wouldn't care if I get criticised or not, I would have told everyone." Since then, reporters have been unable to reach her.

When it comes to controlling the public narrative over coronavirus, the stakes for the Communist party are high, says Zhou Xun, a reader in modern history at the University of Essex and a specialist on health intervention and delivery under the party. An incident in early March – in which one of China's vice-premiers was greeted with shouts claiming "it's fake, it's fake" as she toured a Wuhan residential district – highlighted the growing frustration and audacity of ordinary Chinese people who felt government efforts had fallen short.

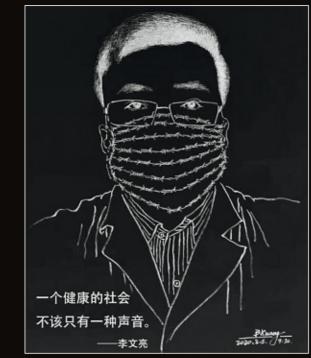
As Zhou points out, a key element of the party's legitimacy is derived from its ability to provide health services to its people – an idea that was undermined by photographs showing long lines of sick patients desperate for assistance. In recent weeks, the government has worked hard to guide attention away from the early missteps of the crisis, including seeking to turn the virus into a "menace from the outside", Zhou says. Several senior Chinese diplomats have actively promoted the idea that coronavirus may have been planted by the US military during the "Military World Games" that took place in Wuhan in October. "Such nationalistic rhetoric will also allow people to forget the earlier tragedy in Wuhan," she says.

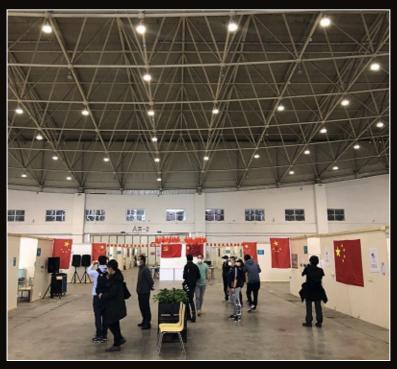
hen it comes to China's timeline of the crisis, Li Yuanyuan has several entries of her own to add. The temperature had dropped to 6C on the morning of February 6, when Li, an office worker in her thirties, brought her ailing 63-year-old mother to Wuhan No 4 Hospital. Several days earlier, Zhang Shiying had been struck with a raspy cough and high fever, one of several people in her building to be overcome with such symptoms. The more she coughed, the worse it got, until she could hardly move from her bed.

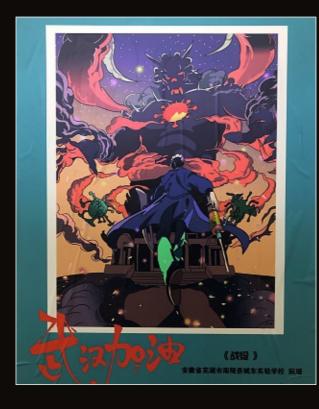
A local clinic confirmed she probably had coronavirus. When the pair arrived at the hospital bundled in down jackets to protect against the cold, they joined the back of a queue that wrapped around the building. It would be six hours before Zhang, who struggled to stand, would see a nurse and receive an intravenous injection of saline fluids often given to those who have a common cold. They made the trip on three consecutive days until her mother could no longer stand.

Following hundreds of other Wuhan residents in early February, Li took to social media as a last resort. In a short message posted on Weibo, a Twitter-like social media platform in China, she sought any help she could get, a desperate cry in cyberspace. The message gave grisly details of her mother's condition: "Difficulty breathing... constant vomiting and diarrhoea, bodily weakness, cannot eat." Li went on to describe an exercise in hopelessness: "I've called the mayor's hotline many times... I've downloaded the State Council's LOCAL OFFICIALS ARE ACCUSED OF NOT ONLY REACTING SLOWLY TO THE OUTBREAK, BUT ALSO OF AGGRESSIVELY SILENCING THOSE WHO TRIED TO RAISE CONCERNS











Clockwise from top: journalists at the now empty Keting Field Hospital in Wuhan; a poster at the hospital marking the medics' fight against the coronavirus outbreak; a guard at Leishenshan Hospital; art depicting Dr Li Wenliang, who raised an early alarm about the outbreak and later died of the disease; a poster outside Leishenshan paying tribute to its doctors

app [for assistance], I've asked for help from community officials all without any results. So in the end I've had to post this here and wait." She signed off with two namaste emojis.

"It was a terrible feeling, standing there in the cold for so long with so many people," she tells me. "We were begging for anyone to help us. My last hope was to beg for help on Weibo."

Assistance eventually arrived when volunteers moved Zhang to a small hotel that had been converted into a quarantine centre. She was then taken to Leishenshan Hospital, a sprawling emergency field hospital built in about 10 days to take in 1,500 patients. All told, Zhang's ordeal lasted from January 28, when she first became ill, to April 11, when she returned home. I speak with Li one day after her mother has arrived back safely at the flat. We talk over the phone because the household is now under lockdown, but stress and fatigue are noticeable in her voice. She says she doesn't know who to blame for the weeks of torment her family suffered but she knows that things were not right and that someone should be accountable for what happened.

When I ask if everyone in her building has recovered, she pauses briefly before offering a subdued response. "No, not the auntie below us. She passed away. My mum and her were friends. They were always chatting. Her symptoms were much worse early on. They went for an injection early and waited in line until midnight. Once she got into bed [back home], she did not get out. There was nowhere for her to go. The hospitals were full."

As Wuhan awakens from the 76-day ban on travel, the streets of Hankou district are buzzing with the release of pent-up energy. There is a noticeable increase of cars on the road. On Liberation Park Avenue, a wide boulevard in central Wuhan, families have come out to bask in the early spring sunlight. For many, it is the first day in months that they have been able to walk freely on the streets.

But the damage to Wuhan is not hidden, and the fear of a second wave of disease is palpable. Many of the shops that have dared to open their doors have placed benches, tables or chairs across the threshold to keep people out. From a safe distance, customers point to the pack of cigarettes or the bowl of instant noodles they want instead of walking the aisles themselves.

The Huanan seafood market in the centre of the city, where the virus is thought to have first infected people, has been boarded up. When I visit on April 6, a large temporary wall has cordoned off the area and several police keep watch over the now-dark shops barely visible behind it. The only evidence that the area was once a market with live animals is the almost unbearable stench that hangs over the nearby streets - a sign that, after the power in the market was shut off, proprietors had left in a hurry without cleaning out their fridges.

Elsewhere, a wartime air still lingers. Many sections of the city remain physically walled off with large blue fencing. A stroll through Hankou district reveals section after section of closed residential areas, where people are allowed to leave only to buy essential goods. I am told by guards outside one section that an asymptomatic case of coronavirus has been found inside and the entire residential area has been shut down. Testing has become ubiquitous to root out hidden cases. One district has set up a hotline and has offered a reward for reporting people with asymptomatic cases, despite these being undetectable without a proper test.

Like many, Hao seems overjoyed to be outside and back on the streets of his city. He had his hair cut a day earlier, the first time in 100 days, he says. Several fluffy seeds falling from the sycamore trees have collected on his freshly cropped head.

Distrust has been part of Hao's outlook since his days as a university student in Wuhan in 1989, when protests swept campuses across the country, culminating with the Tiananmen massacre that June. Some of his anger against the Communist party runs deeper. With tears in his eyes, he tells of an impoverished childhood, when his family was forced to eat radish skins while officials lived in comfort.

Activism and revolution are also part of Wuhan's tradition. In 1911, the city sparked off the initial unrest – now called the Wuchang Uprising – that eventually led to the overthrow of the Qing dynasty, China's last feudal dynasty. In 1967, the Cultural Revolution came to a head in the city when students and workers clashed in deadly riots in the streets, forcing China's leader Mao Zedong and other revolutionary elites to tone down the movement, lest they lose control over it. Hao's father participated in the clashes, he says, and he insists that revolution and disobedience run strong in Wuhanese blood.

"When I was a child my father told me that there was a rotting body left in the streets for a month [after the clashes] - not far from here," he says pointing toward the city's old quarters. He tells the story with the same sense of intrigue as a child who has overheard some unspeakable detail and cannot quite grasp its significance. "The corpse swelled up to five times the normal size."

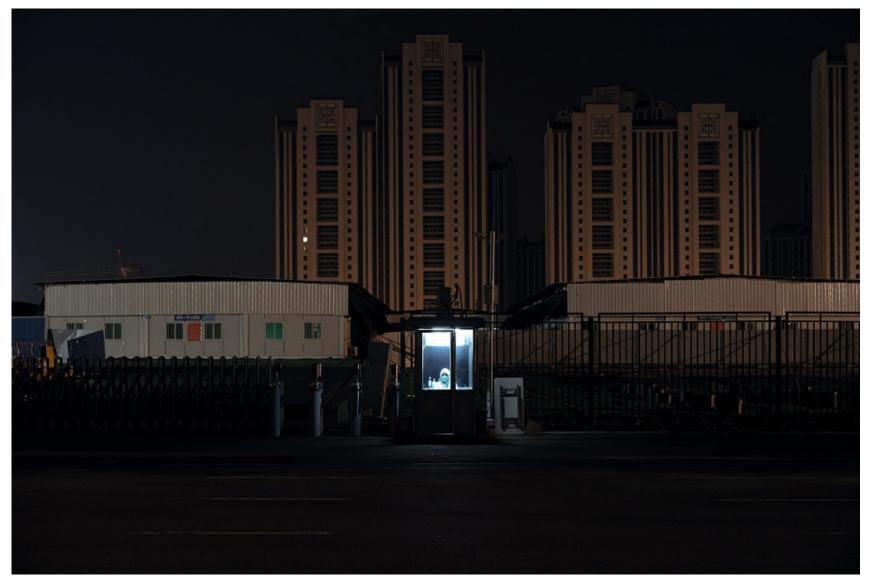
Hao looks up and points at the camphor tree we are sitting beneath and smiles. "I like to come and sit here when it rains. The raindrops mix with the oil on the tree and it produces a lovely fragrance. The whole park smells of it."

Surreptitiously monitoring the outbreak is a risky occupation. Hao has not posted his pictures online publicly but several of his friends actively sought to record events in an attempt to inform the public. Among these was Fang Bin, a businessman and activist, who vanished in early February after recording and publishing a 40-minute video on YouTube in which he is heard commenting on the number of corpses accumulating at a hospital. "Why isn't the media coming to the hospitals to report the real situation?" he asks.

Chen Qiushi, a lawyer and citizen journalist, began posting videos from around Wuhan in which he showed long lines of weak, frustrated patients waiting to see doctors. He, too, has disappeared and has yet to resurface. My attempts to locate and speak with both men while in Wuhan failed.

In what has been perhaps the most direct written attack on the Communist party during the outbreak, real-estate tycoon and high-ranking party member Ren Zhiqiang, based in Beijing, penned a missive in early February in which he accused the party of incompetence and called Xi Jinping a clown. "When shameless and ignorant people attempt to resign themselves to the stupidity of the great leader, society becomes a mob that is hard to develop and sustain," he wrote. His essay was shared online with a group of friends, and later circulated more widely on Chinese social media.

Ren became incommunicado in March, a close acquaintance told the FT. Some have noted that his credentials as a party insider made his criticisms **>**



A security guard in his office at Leishenshan Hospital on April 13

◄ an unignorable threat to the government's narrative of a quick and transparent handling of the crisis. On April 7, one day before Wuhan reopened to the outside world, the local party discipline watchdog announced an official investigation into the businessman.

In the early days of the outbreak in China, as the Communist party came under mounting pressure over its inability to contain the spread, some experts saw a small glimmer of hope for political change in the country, says Huang Yanzhong, a senior fellow for global health at the New York-based Council on Foreign Relations. But mismanagement of the disease elsewhere in the world quickly took the onus off the party. The announcement of the investigation into Ren on the eve of Wuhan's reopening was a strong signal that any political change was off the table. "It was quite calculated they did that on the day before Wuhan opened up," says Huang. "They have closed the window on any political change with the investigation into Ren."

While the Trump administration has sought to blame China for the outbreak, the bungled US response in cities such as New York, which has more than double the number of official deaths in Wuhan, has been useful for China in deflecting criticism of its authoritarian system. "The failure of many governments from around the world to deal with Covid-19 only goes to show that governance failure comes in many different flavours," said Jude Blanchette, a China expert at the Center for Strategic and International Studies in Washington. "But for the CCP, it can now point to open political systems and say, 'See? This is what liberal democracy gets you."

> nly when Xu Xu pulls down her mask for a sip of coffee do I realise that I have not seen her face until that moment. In fact, almost all the conversations I have had over the past week have been faceless,

mask to mask. Her nose quickly disappears again and will be visible only a few more times until her cup of latte is empty.

Xu, a 28-year-old in Wuhan, was among thousands of volunteers recruited to help build the city's biggest hospital. On December 30, rumours of an unknown virus began to proliferate on her WeChat account. Social media is heavily censored in China and sensitive topics are often quickly scrubbed from the internet. But Xu, who has asked to use a pseudonym, and many other Wuhan locals say that knowledge of a mysterious illness was widespread enough to break through at least some level of censorship – or perhaps it had not yet grabbed the attention of government internet monitors. If her friends' friends had heard about it, authorities must have known much sooner, Xu believes. "This is just information shared among friends, nothing official. We really didn't think much about it at the time and just went on like normal. We kept hearing about it but there was no real alarm for almost a month," she says. Looking back, she does not fully accept the narrative put forward by the government. "There are definitely questions about the early days of the outbreak... When they closed the city, we were terrified. I never heard the words *'feng cheng'* before. I didn't know that was possible."

Feng cheng means to seal the city. On January 22, just two days after officials confirmed humanto-human transmission of the virus, the central government said it would close all transportation in and out of Wuhan at 10am the following day. Over the next few days, the province of Hubei, where the city is located, followed suit, putting into effect a cordon sanitaire covering about 60 million people, the largest in history. In many areas with recorded cases, stepping outside one's home became illegal. All taxi, bus and city transport was suspended.

As people were forced inside and the streets emptied, Xu volunteered to head to the frontlines. She says she felt it was her duty as a young, able-bodied person to come to the assistance of the weak and dying. On January 28, she joined a team of thousands of volunteers to build the Huoshenshan Hospital, another sprawling complex of fever wards erected in about 10 days. Xu spent that week



People taking a walk at Hankou riverbank park this month as life began to return to normal following lockdown

carrying materials. Days later she was dispatched to a neighbourhood in central Wuhan where she began delivering rations to quarantined families and also helping elderly people reach the hospital for doctors' appointments. "We went to where no one wanted to go," she says, referring to her many trips into areas known to have high infection rates.

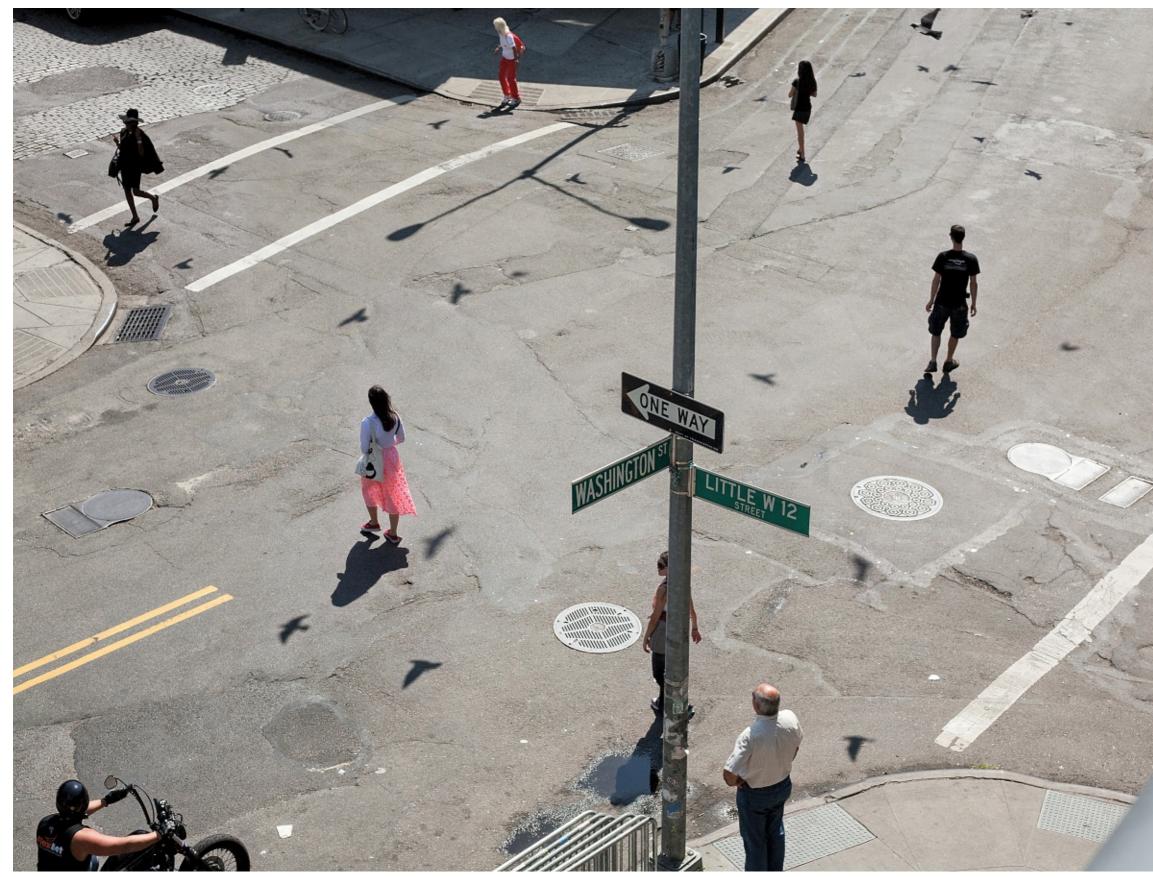
Keting Field Hospital is empty by April 8, when I and other reporters are given an official tour. I never catch a glimpse of Dr Zhang Junjian's face as he leads a group of reporters around. But above the surgical mask, his eyes show the signs of sleepless nights. As vice-president of Wuhan's Zhongnan hospital, over the past two months he will have seen thousands of patients, many of them deathly ill. Before it became a field hospital, Keting was a large cultural centre in the northern reaches of the city. A massive poster of South Korean pop star Rain overlooks hundreds of empty beds in the section of the auditorium we tour. As a hospital, it treated 1,760 patients, with more than 1,400 people lying in beds in the tightly controlled fever wards at the peak of the outbreak. On one divider wall, Post-it Notes form a large heart, each with a handwritten message. It is a tribute to the patients, created by a team of doctors that came to work in the hospital from the neighbouring province of Fujian. "We are together with you Wuhan," is written on paper cut-outs beside the memorial.

Today Keting has become a museum of sorts, dedicated to the Communist party narrative of success in tackling coronavirus. Standing in front of the yellow sickle and hammer on one of the many party flags pinned to walls, Zhang tells reporters that not a single patient died there, though he admits the most serious cases were moved to a hospital next door. Still, the field hospital stands as evidence of the party's quick and effective work, to be shown off to visitors looking for signs of mismanagement. Steering critical questions away from the origins and early days of the outbreak, Zhang's message is one of a return to normality in the shaken city.

Though it has not yet been added to *The Chinese Way*, the trip around Keting feels like we are walking to the end of China's official timeline for the disaster in Wuhan, where the final line of the story is punctuated by an empty hospital with a flawless record.

But for people such as Hao, the outbreak has been less of a linear tale of adversity and triumph. Instead it is a reminder of the constant struggle to live outside the Communist party's sanitised narrative. "Some of us will disappear. This is nothing new," he says from his seat in the park, his mask pulled down to his chin, exposing a cheerful grin. "But we will keep trying to show you what is real."

Don Weinland is an FT Beijing correspondent. Additional reporting by Wang Xueqiao in Shanghai A WARTIME AIR STILL LINGERS IN WUHAN WITH MANY SECTIONS OF THE CITY REMAINING PHYSICALLY WALLED OFF





Confined to her home in New York City, the author *Siri Hustvedt* reflects on the dangers of President Trump's divisive rhetoric at a time when we have never been more dependent on our fellow human beings. Photographs by *Pelle Cass* From the house I share with my husband in Brooklyn, there is little to see these days except the empty street and the occasional masked, forlorn pedestrian. But as I sit at my desk and write, I hear the sirens all day. Every alarm signals a person in crisis, and that person's fate is inevitably bound to the fates of others - family and friends. It is a noise that deserves moral attention. I have come to think of the sirens as the city's heartbreaking music, a highpitched dirge that accompanies the number in the newspaper every day: 731, 779, 799. As grim as the daily count of corpses in New York State may be, it seems it was too low. Until recently, New York City has not recorded the cause of death as Covid-19 unless the person was tested. Those who died at home were not tested, and there are many of them. On April 12, the number fell. There is talk of "a plateau" and a "flattened curve" - human suffering charted on a graph.

I have lived in this dense, jostling city for over 40 years, and it is surely a testament to our new reality that I find myself longing to push through the door of the Q or F or No 2 train with a hundred other people and stand tightly pressed against shoulders, heads, elbows, ▶

'I have come to think of the sirens as the city's heartbreaking music'

▲ knees, oversized packages and bulbous backpacks as I breathe in the smell of sweat mingled with the pungent and vague culinary odours that waft through the car.

On March 11, five days after I taught my seminar in narrative psychiatry to psychiatric residents at Weill Cornell Medical Center in Manhattan, visited a department store, walked 20 blocks with hordes of fellow New Yorkers and took three taxis (I avoided the subway because the virus had arrived), I fell ill with something. My husband came down with the ailment a few days later. The symptoms lingered for a while, but they were never serious. We recovered. On March 22, a friend forwarded a tweet from a physician alerting his colleagues to a fellow doctor who had tested positive for the virus. The man had chest constriction, cough, severe headache, body aches but no fever: an exact description of my symptoms. Our family physician suspects we had it. He suspects he had it. None of us had access to a test.

"Anybody that wants a test can get a test," Donald Trump told reporters on March 6, the same day I was out and about in Manhattan.

ampaging illness and economic paralysis are global, but the pandemic is different in different countries; and within a single country, it is different in different cities; and within a city, the degree of suffering varies from neighbourhood to neighbourhood. In NYC, it depends on class, colour, immigration status and job description. Just as they did during the yellow fever epidemic of 1795, the cholera epidemic of 1832 and the flu pandemic of 1918, moneyed New Yorkers have fled town for their country houses to wait out the scourge, leaving behind the crowded and vulnerable poor who cannot afford "social distancing".

According to Merriam-Webster, the term "social distancing" was born in 2003. When words and images "go viral", they spread with the speed of a highly contagious virus across media to infect

millions. The metaphor is apt. For a brief time, a viral message is alive in its readers and viewers and becomes a form of mass cognition. The metaphor viral for this form of voluminous communication might be said to once have had its own viral character, which began about 10 years ago. It is now part of the English language.

A literal virus is a biological zombie. It occupies a borderland between the dead and the living. Virologists argue about whether to categorise it as one or the other. Although viruses are composed of the same nucleic acids found in our own cells, they cannot reproduce without a host organism - the host brings them to life. Viruses are a ubiquitous part of the biosphere. They are inside and outside us. The human virome consists of all the viruses in our bodies and plays an essential role in our immune responses. Some viruses benefit their hosts. Others kill them.

The language we use to talk about a real infectious disease matters. The governor of New York, Andrew Cuomo, who holds a daily briefing for the state's citizens, has been forthright about the present dangers and clear about safety measures. He has also shared with the public what remains unknown and has demonstrated compassion for people who are ill or working on what has come to be called "the frontlines" - people in hospitals and grocery stores, people delivering mail and packages and retrieving our garbage.

The contrast between his language and that of the president of the United States is more than a matter of style. In February, Donald Trump suggested that Sars-CoV-2 could be banished by magical thinking. It would "disappear" "like a miracle", perhaps in April. He referred to the virus as "their new hoax", a deception presumably perpetrated by Democrats to discredit him. He personified it as the "Chinese" virus, a figment with possible Mexican relatives. "We need the Wall more than ever!" he tweeted on March 10, echoing a tweet from the founder of the rightwing group Turning Point USA.

Trump has repeatedly suggested that closing national borders and stopping air travel is an efficient method for halting the spread of the virus. On January 31, he barred most foreigners who had visited China from entering the US. He then claimed the virus had been "pretty much shut... down". At a rally on February 28, he said: "Border security is also health security." For years, he has employed metaphors of immigrants as biological contaminants that infect the white body politic with their impurities. In a 2015 speech, he turned "Mexican immigrants" into a mysterious liquid force: "tremendous infectious disease pouring across the border". The president's immigrant-as-pathogen rhetoric has a long and ugly history in the US. An article in The Saturday Evening Post from 1923 by

WT Ellis may stand as exemplary. Immigrants constitute a "stream of impurity" and "a tide of pollution". In 2018, the American Journal of Public Health published "The 1918 Influenza Pandemic: Lessons Learned and Not," a series of articles on how to prepare for the coming pandemic. (That same year, the Trump administration largely disbanded the pandemic response team.) In their introduction to the papers devoted to the topic, Wendy Parmet and Mark Rothstein identify the three "leading threats to global public health" as "hubris, isolationism, and distrust". The hubris is scientific and technological - a faith in fancy new tools. We do have high-tech tools but, as the authors point out, they are "woefully ineffective" in halting the spread of influenza and, I will add, coronaviruses.



During lockdown, Pelle Cass has been reworking his long-term street photography project Selected People to fit the current climate of isolation. Going back through the archives, he is making new work that 'reimagines the world as a more attenuated and sombre place'

ABOUT THE PHOTOGRAPHS

'The US. which has the *highest number of deaths* from Covid-19, is a country riddled with distrust'

Isolationism is the naive belief that closing a nation's borders will keep a virus at bay. "Xenophobia, rather than science," they write, "helps to explain the call for travel bans." Distrust is a loss of faith in government, journalism and science. The US, which has the highest number of deaths from Covid-19 in the world, is a country riddled with distrust.

/iral figures of speech have collided and mingled with an actual virus. "We, all of us, grave or light, get our thoughts entangled in metaphors and act fatally on the strength of them," George Eliot's narrator famously said in *Middlemarch*.

The body politic is a metaphor for a collective entity - the nation. Human beings are not viruses, even though viruses are, in fact, part of all of us. The human virome is in intimate interaction with the bacteria in our bodies, the microbiome. We need these fellow travellers to live. Every person is a multiplicity, a community of symbiotic relations that includes a diversity of DNA. In light of this, philosophers of biology have begun to question how to draw the lines between "us" and "them" and whether such divisions make any sense at all. The human body is an ecosystem that depends on the ecosystems around it. And we are social animals, heavily dependent on others like us for our survival. The pandemic has surely brought home how dependent every one of us is on the elaborate societal arrangements that sustain us, from running water in the tap to food on the grocery store shelves.

And this is where the irony becomes most acute. The political rhetoric of closed borders and impenetrable walls, of "lock her up" and "send her back", of shutting down and shutting out, of purity and impurity, of us versus them, this language of hubris, isolation and distrust in the midst of a public health emergency, is killing people. It is a rhetoric that articulates a pernicious fantasy of the isolated, autonomous person who gave birth

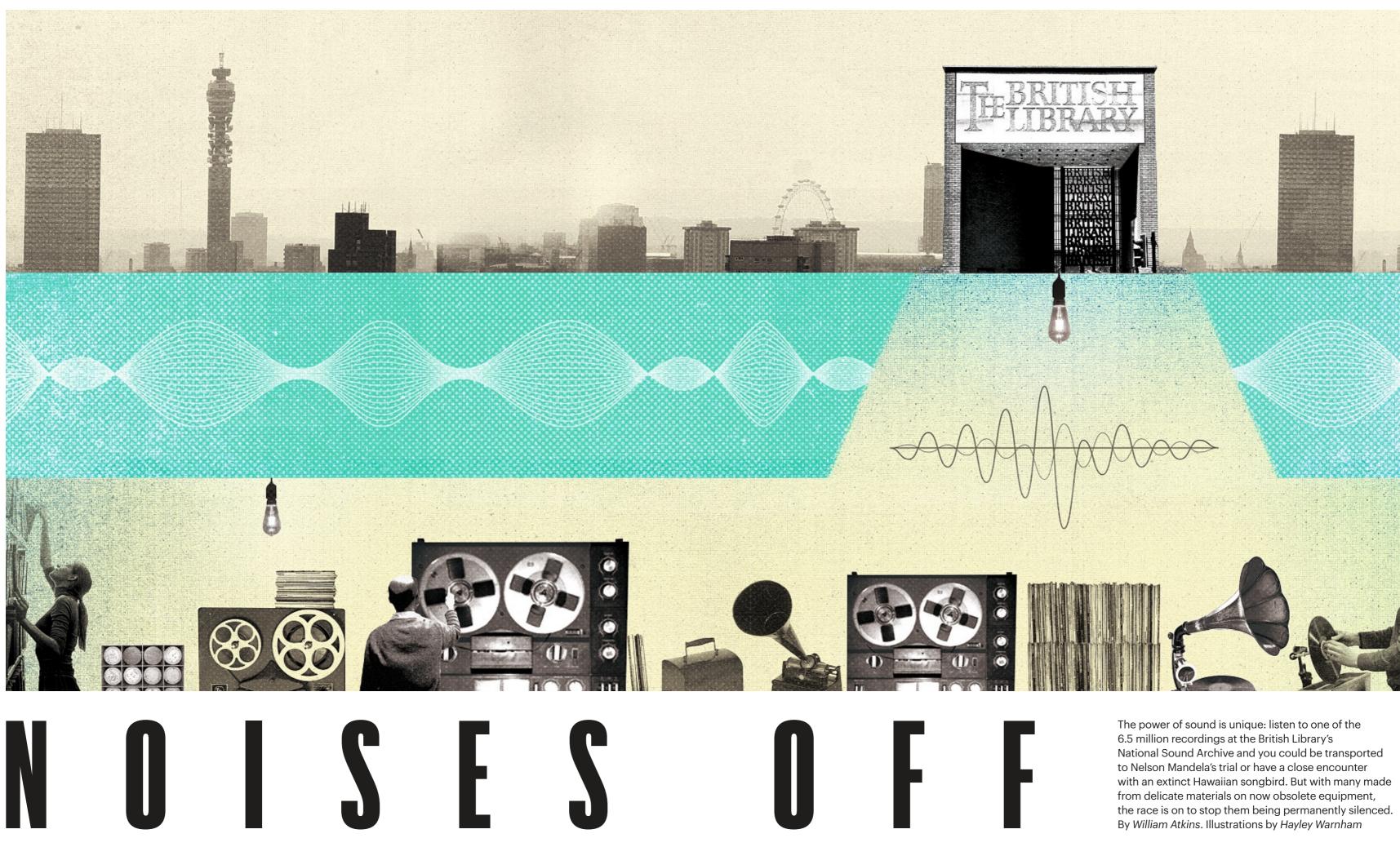
to himself and needs no one. The lone cowboy, the self-made man, the rugged individual are American iterations of this fictional being, inevitably a male, white being. The nightly instalments of The Donald Trump Show, disguised as briefings on the coronavirus, during which the Commander in Chief boasts, swaggers and punches, but never betrays the slightest sign of empathy for another person or guilt for his own actions, serve as the perfect theatrical embodiment of a ruinous ideology.

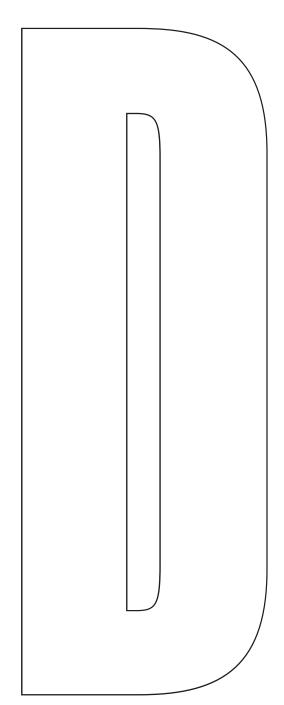
The failure of the Trump administration to prepare for an inevitable pandemic, to listen to virologists, epidemiologists and public health experts, and to act decisively and quickly when the threat arose: the incompetence. chaos and lies that have accompanied decisions; the lack of tests, ventilators and protective gear that would have saved lives, are the direct result of an ideology, which, along with its xenophobia, racism and misogyny, is profoundly anti-intellectual. The income inequality that has been growing in this country since the 1970s and the brutal racial disparities of our private healthcare system have become only more visible during the pandemic. I think this deserves moral attention.

There will be an end to the pandemic, although we don't know what that will look like now. They say more than 20,000 New Yorkers died when influenza swept through the city in 1918. The estimate for the global death toll that year is 50 million. In the US, most people forgot about it. I suggest we not forget this pandemic, if only because our ecosystems are vulnerable. I suggest the virus that leapt from an animal to a human being sometime last year has made it clear that we are inextricably entangled with, and dependent on, one another and must also co-exist with other mammals and birds and insects and plants and bacteria and viruses on this small and fragile earth. **FI**

Siri Hustvedt's latest book is

"Memories of the Future", £18.99





eep in a basement beneath the British Library in London, the lift doors open to a din like a ship's engine room. "It gets a bit noisy here!" says Richard Ranft, the library's head of sound and vision. The hubbub is coming from a network of conveyor belts hung from the ceiling, on which a red crate occasionally trundles past on its way up to the public reading rooms. A week before his retirement, Ranft has made time to come and find a tape recording that's close to his heart the call of a species of nocturnal monkey. Given that his leaving do took place last night and it's 10.30am, he is in valiantly high spirits.

It's not well known among the British Library's thousands of users that its 200 million items include sound recordings. The National Sound Archive, as it is known, comprises more than 6.5 million recordings, of all kinds, held on more than 1.8 million physical "carriers", in no fewer than 42 different formats. These range from wax cylinder and shellac disc to MiniDisc and CD, as well as rarer formats such as dictation cassette and magnetic wire. Most of these items are held here in the three-storey storage facility under the library's main building in St Pancras.

Ranft's retirement, and my visit, comes at a critical phase in the history of sound archiving. Much of the world's audio heritage is at risk of becoming unlistenable within a few years - about 15, is the global consensus due to a combination of physical degradation and technical obsolescence. It's as if the world had learnt that most books would shortly turn to dust. Ranft's work for the past three years - you could say his entire 37-year career - has been a race to avert this silencing.

On March 2 1905, the London Evening News

published an anonymous letter making what was at the time a left-field suggestion: that as well as collecting written works, the British Museum, as then owner of the nation's "library of record", begin collecting sound recordings (Edison's phonograph was less than 30 years old). The museum replied that, under its government funding agreement, only books and manuscripts could be acquired. Furthermore, the shellac records of the time were prone to wearing out, meaning that any such archive would quickly be obliterated by use. A solution came from industry: the Gramophone Company, soon to be famous for the His Master's Voice label, offered to donate the copper matrices - master discs - used for pressing records to the museum. Ranft shows me some of those 66 matrices, sealed in tarnished brass cases the size and shape of dinner plates.

It wasn't until 1955, 50 years after that letter appeared, that the British Institute of Recorded Sound (BIRS) was established. It was the brainchild of Patrick Saul, a music enthusiast who had despaired at the sparsity of the British Museum's sound collection, which, as late as 1925, held only a few dozen of the 100,000 or so records then in circulation. Saul had first gone to the museum to listen to a recording of a particular violin sonata by Ernst von Dohnányi, which was no longer commercially available, only to be told that the museum didn't have it either. "Saul said it was like hearing about death for the first time as a child," says Ranft. "The idea that these performances could just vanish!"

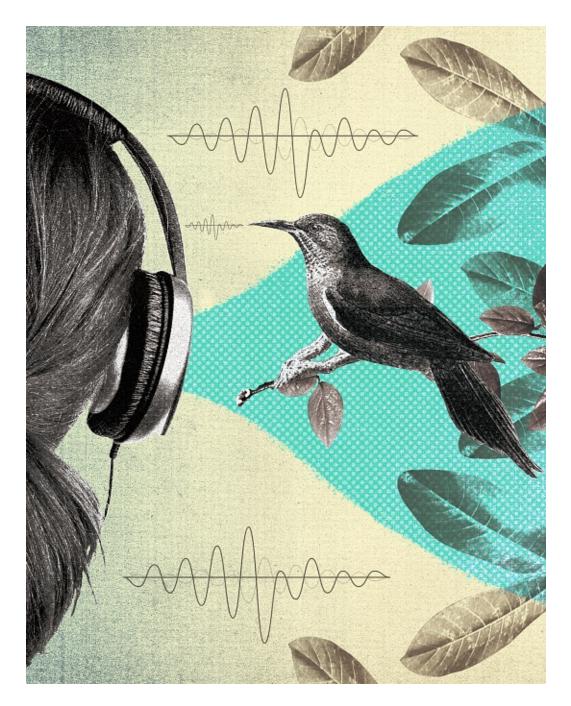
Ranft joined the BIRS in 1983. It was a surprising career move for an ambitious young primatologist. He'd made his first tape only two years earlier, in the Brazilian Amazon, where he'd gone to look for so-called owl monkeys. He visited the BIRS to listen to a recording of the same species deposited by another recordist. "I was asked if I could leave copies of my recordings. We got chatting and they said, 'We need a bit of help.'" That year, the BIRS was finally integrated into the British Museum, as the National Sound Archive.

By 2015, the collection had been absorbed into the British Library, which was founded in 1973. Ranft, as head of the archive, helped launch Save Our Sounds, an eight-year programme designed to help preserve Britain's sound heritage. Its initials suggest the urgency of its mission. As with any library, the sound archive's value lies in its very breadth and diversity: millions of unique recordings are at risk, ranging from music and radio to oral history and wildlife. One crucial strand of Save Our Sounds, an £18.8m project called Unlocking Our Sound Heritage, is tasked with preserving and digitising existing recordings - around 110,000 physical items from the library and some 50,000 from regional collections, equating to around 470,000 individual recordings.

"We went to the management of the British Library and said, 'Look, if we carry on at this rate we're at risk of losing parts of the collection," Ranft tells me.

The threats faced by the library and sound archives around the world are of three main kinds. First, carriers physically degrade, some faster than others. When a wax cylinder starts to crack, or the binder in magnetic tape breaks down, little can be done to make it playable again. Second, the machinery required to play those carriers is constantly cascading into obsolescence. More urgently, another kind of carrier is starting to vanish: as audio engineers familiar with the ageing playback technology grow old themselves, the passing-on of their expertise becomes imperative.

The project digitised its 100,000th recording last April: a Nigerian blacksmith playing a piece of "hammer and anvil" music, in which the tones and rhythms mimic those of Yoruba speech. Another recently digitised recording



The archive includes a number of species humankind has already wiped out, including a Hawaiian songbird last heard in 1987 singing for its mate, who died the previous year preserves the voice of Sir Francis Chichester from his yacht Gipsy Moth IV during his 1966-67 circumnavigation of the globe, speaking by radio to his wife, Lady Sheila. It's three months since they have spoken and, while the recording is dominated by the exchange of details about the weather and his position, their pleasure at hearing one another's voices is unmistakable, despite the fizz and hum of the poor-quality connection.

To date, Unlocking Our Sound Heritage has

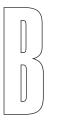
digitised nearly 70,000 items and more than 150,000 recordings, but this is still only a fraction of the library's collection. Unlike text, images and film, there are few ways of expediting the process of digitising analogue audio. "At least with moving images, it's not opaque," Ranft explains. "You can have a freeze-frame from a movie. You just don't have that with sound; you simply have to play it back."

As a medium, sound has not historically been accorded the same authority as the written word. Only recently did academic journals start to accept citations to sound recordings, for instance. This historic poor-relation status is explained partly by recorded sound's relative newness. When Edison's phonograph, a kind of gramophone, was marketed in the early 20th century, it was chiefly as a toy for the well-off.

While sound recording has been used by ethnomusicologists and other researchers for almost as long as it has existed, oral historians would often record over their tapes once they had been transcribed. Ranft winces at the loss. "The words carry so much more. The intonation, the emotion, things that are untranscribable. The-pauses-between-the-words-when-peoplewant-to-emphasise-something... You can write that down, but you can't really capture it." (He's right. As I listen back to our discussion, I realise dashes, ellipses and italics get you only so far.)

He mentions the tape recordings of Nelson Mandela's trial in Pretoria in 1964, in which the ANC leader gave a bravura three-hour speech in his own defence – how the transcripts fail to convey the measured, sorrowful conviction of Mandela's voice, or the courtroom's collective gasp when he declares that the "ideal of a free and democratic society... is an ideal for which I am prepared to die".

We duck between shelves lined with tens of thousands of recordings and Ranft pulls items out at random, a vintner sampling his cellar: a tape of BBC radio segments from 1981 about the attempted assassination of the Pope; an Edison brown-wax cylinder of Weber's "Invitation to the Waltz" played by the London Regimental Band in 1902; a cardboard box containing 7in tapes of home recordings of radio broadcasts made by one AWE Perkins between 1952 and 1970; Pogodin's ▶ ▲ Lenin: The Third Pathétique performed by the Moscow Art Theatre at the Aldwych Theatre on June 1 1970... In the impression of infinite variety is contained the ideal library, one that includes all knowledge, as if every sound ever made might be discoverable somewhere on these shelves. I follow him into an aisle lined with boxed quarter-inch tapes and he touches a finger to their yellowed spines as he searches for the shelf mark written on a scrap of paper he's carrying. "It's somewhere here..." Finally, he slides out a box, its original species label still attached, the recording he made in the Amazon nearly 30 years ago: Aotus nigriceps, black-headed night monkey.



ack at ground level, someone is hammering in fence posts - then there's the sharp crunch of a snare drum, a loud tut, a hi-hat, a cap gun goes off; then the hammering resumes, accelerating furiously. It sounds like a drummer going hell for leather in a disused warehouse. "This is one of the first recordings

I heard when I started here," says Cheryl Tipp, the library's wildlife sounds curator. "I didn't think it was real!" I'm at a loss as to the extraordinary noises coming from the speakers either side of her desk, so she tells me: they are the underwater vocalisations of a male walrus.

"If you're a sound archivist, or any kind of archivist, you've naturally got this collector's mentality," says Tipp. That mentality is also the enthusiast's mentality, it occurs to me - there's a cheerful crusading quality to her affection for sound as a medium. "The effects I've seen," she says. "You can bring people to tears."

Like Richard Ranft, Tipp studied zoology, before starting work in the sound archive as a cataloguer. Besides music and the spoken word, there are about a quarter of a million wildlife recordings here, mostly on open-reel tape, of which some 8,000 have so far been digitised. Tipp continues to receive obsolete analogue recordings from the public. "It's very difficult to turn down anything. If someone offers you a collection, you might not be able to work on it straightaway, but in your head you're thinking, 'Well one day I'm going to be able to, and I can't let it go to a skip." Does she have to resist that impulse? "No, I embrace it! I bring in everything!"

Those recordings are made mostly by bioacousticians, animal behaviourists and hobbyists - "I say 'hobbyists', but they're incredible at what they do." Tipp's most recent acquisition is a collection of compact cassettes from the estate of the British ornithologist Yvonne Malcolm-Coe, a pioneer in the study of the birds of Kenya during the 1950s and 1960s, when lone female wildlife recordists



After the second world war, British Foreign Office investigators in Berlin located a pressing plant used to copy recordings of Hitler's radio broadcasts on to shellac disc were virtually unheard of. "You sometimes get a husband-and-wife pair, but you very rarely get collections of recordings made by women, so this is a really important collection from that point of view."

Users of the collection today include a researcher studying song in female birds and another the classification of warblers. But not all the enquiries Tipp receives are so innocuous. Some years ago, an American hunter requested a recording of an African big-game species to lure others of its kind. Tipp refused. "If the recordist knew that we had taken his recordings and given them to a man who used them to lure the animal in to shoot it and stuff it! No!" Such a use could contribute to a species' extinction, the opposite of what she sees as the collection's purpose.

The archive does include a small number of species humankind has already wiped out, including a Hawaiian songbird last heard in 1987: the Kaua'i O'o A'a - "the very, very last male," says Tipp - singing for its mate, who died the previous year. Later, she emails me an audio file. To a backdrop of heavy rain on leaves, the bird repeats its refrain, four, five times. This is recorded sound's unique power, distinct from that of the moving image: to snatch those hearing it out of their time and place, and teleport them to the forest, yards from the extinct bird, or the courtroom as the freedom fighter's words reorient the course of history.

"At least we've got his voice," says Tipp, of the Kaua'i O'o A'a. "At least we know what he sounded like. Just a record of a living thing that lived on this planet." Hearing the bird, it's impossible not to read into its song a question, something plaintive and accusatory; and to see what Tipp means – hear what she means – about such recordings moving listeners to tears.

In the library's conservation studios, behind its

main building in St Pancras, is the British Sound Archive's small lab, with its ultrasonic bath and precision oven. There, Gavin Bardon, one of the audio engineers, is working his way through a collection of thousands of shellac discs, brushing each one with distilled water and a wetting agent to ensure the closest possible contact with the stylus when he takes them to be digitised. The story behind the records is extraordinary. "Basically it's full of Nazis," he says.

During the 1930s, Bardon explains, Germany's Reich Broadcasting Company recorded hundreds of radio broadcasts on shellac disc. All were destroyed or lost during the second world war, but in its aftermath, British Foreign Office investigators in Berlin located a pressing plant in which were some 4,500 of the metal matrices used for pressing the discs. These were in turn used by the Royal Signals corps to make new shellac pressings. Such was the rush, that the Aand B-sides do not always match. "They didn't look at the matrix numbers at all," says Bardon. The discs were then requisitioned by British prosecutors at the 1945 Nuremberg war-crimes trials. Subsequently, they were passed to the BBC and then, in 1955, to the BIRS and then the British Library. Their contents, which include speeches by Hitler, have been drawn on by researchers in Germany, but much of the material remains unheard. "Sometimes we get a bit of music," says Bardon, "which is nice, considering there's four and a half thousand of these things."

The styli required to play back old discs such as these is not widely available, explains Adam Tovell, the head of technical services for sound and vision. "There's one manufacturer in the UK, very small, and it won't be around for ever." This, along with the discs' historical significance, is why they are being digitised now. "We want to prioritise the rare and unique above the more commonly available," he says. "But it's the things that will affect the long-term accessibility of the collection that are key."

Many carriers are already unplayable. Tovell shows me a shellac disc of Phyllis Frost performing "Devil and the Deep Blue Sea" from the 1940s, its surface fragmented and scurfing like old paint; and another, Dave Cavanagh's album Air Shot (released 1950), rimed in an eczema-like white encrustation. Even carriers such as these are carefully preserved, however, their sloughed flakes gathered in a protective cavity in the same foam casing that houses the remains of the disc from which they come, in case future technologies allow their information to be recovered. Laser topographic scanning, an emergent technology, which maps a disc's surface without physical contact, may be one solution. "We don't know what's coming round the corner," says Tovell, "but what we do know is that the collection is disappearing unless we do something about it now."

Dressed in black, Tovell has the sardonic, unflappable manner of a rock-music producer granting an umpteenth take on a dwindling budget. Recruitment is a challenge as urgent as preservation, he says. Even the most specialised audio-engineering courses don't teach the component-by-component repair of obsolete equipment - "Because why would you? That's not going to set you up for a career." He pauses for a beat: "Unless you want to work here."

Obsolescence isn't always linked to the technology's age. "Go out today and buy me a new MiniDisc player. You're going to struggle, and that's a format that isn't particularly old." (Sony ceased production in 2013.) "Whereas go out and find me a turntable – fine!" Nor is vinyl the only format to enjoy a resurgence. "They've just reissued all of Björk's back catalogue on cassette. Thanks, Björk, we thought we'd done them all..."

The most endangered items in the archive resemble chocolate-dipped toilet-roll tubes. "It feels a bit like a crayon," says Robert Cowlin, another of the audio engineers. He's holding a brown-wax cylinder, chipped at one end, its surface grooved latitudinally, an early counterpart to the record. "Mould will literally eat away at the recording," explains Tovell, "because there's tasty organic material there to feast on. And that's it, gone."

Sliding the cylinder on to a steel spindle and slotting it into a 1902 phonograph, Cowlin adjusts the stylus and cranks the handle. Silence; then from the phonograph's black horn comes the respirator hiss of the rotating cylinder, then a spoken introduction magicked from its grooves, like someone announcing a dignitary's arrival at a ball: "'The Lass O' Killiecrankie', sung by Harry Lauder..." and Lauder's crackling, vaudeville lament from the faraway room that is 1904: "Oh, years ago, I used to be the smartest chap as you would see..." It's almost precisely what a listener, still glamoured by the miracle of recorded sound, would have heard 116 years ago.



.....

ichard Ranft, a few days short of retirement, arrives with a copy of the recording he found. The twin speakers either side of Cowlin's desk start to hiss, there's an exchange of smiles as Ranft's youthful voice introduces the recording, and then, like a wave hitting, the room is filled with the billion-voiced shriek of the

rainforest at night. We each assume an expectant attitude: ears cocked, gazes turned inward – Ranft's towards his memory of that night on Brazil's Jutaí River in 1981. Then there it is, nothing dramatic, just a muted double woof like a nervous owl. Night monkey. "I can picture it!" he says. "I'm not in a studio in London… I'm there."

It is, as Cheryl Tipp put it earlier: "Just a record of a living thing that lived on this planet." But at that moment it doesn't seem fanciful to think of the National Sound Archive itself as rainforest-like in its vulnerability and diversity - from the Kaua'i O'o A'a to "The Lass O' Killiecrankie" - and the work of Ranft and Tipp and their colleagues as resembling that of the zoologists they trained to be: to itemise what's there, to describe and catalogue it, to identify that which is most imperilled and to try to keep it from extinction.

William Atkins is the author of "The Immeasurable World" (Faber & Faber, £10.99). To listen to a selection from the British Library's extensive collections of sound, visit sounds.bl.uk



Apocalypse how?

As a catastrophiser who spent the past few years writing a book on surviving the end of the world, *Mark O'Connell* has found society's ability to join together in the face of a deadly viral pandemic a reassuring surprise

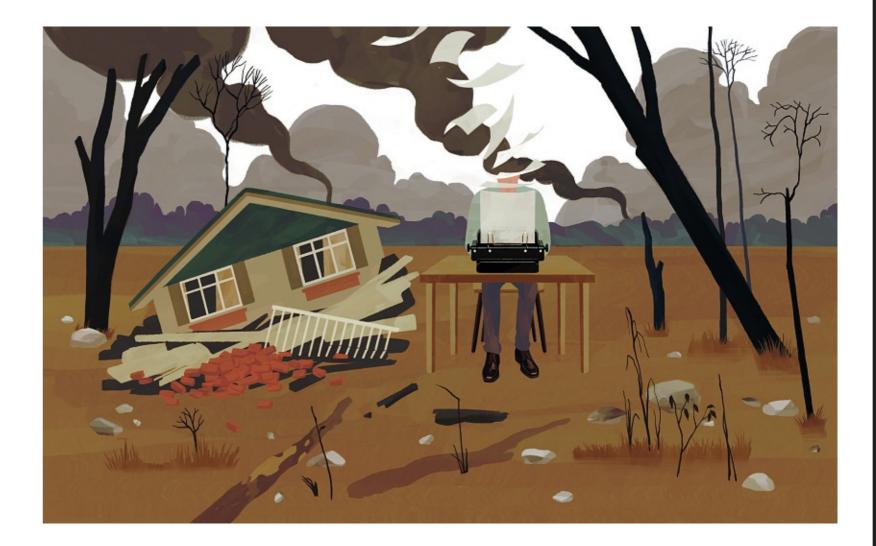
About three and a half years ago, during a

time that now seems to belong to an earlier historical era, I became obsessed with the idea of the apocalypse. The prospect of climate catastrophe was increasingly imminent, the fabric of the global political order was beginning to fray and it seemed to me that some incalculable darkness was gathering on the horizon of the future.

Sitting on the couch with my son as he watched cartoons about friendly anthropomorphised animals, I would come across a news story on my Twitter feed about how yet another species had gone extinct, or about a chunk of ice the size of lower Manhattan that had just broken off a polar ice cap, or the terrifying proliferation of antibiotic-resistant diseases, and I would look at the back of my son's head, his soft and slender little neck, and feel an overwhelming guilt about the world he had been thrust into.

Even at the best of times, I am a gifted and prolific catastrophiser, capable in any given situation of the most virtuosically dire projections. Mild nausea? Stage-four stomach cancer. A spot of routine turbulence at 25,000ft? The phrases "shortly after takeoff" and "no survivors" jostle for primacy in my mind.

So it was not in my nature to imagine a version of the future that was not intolerably dark, and incompatible with the kind of world I wanted my son to live in. One of the advantages of being a writer, though, is that it is always possible to divert your emotions into your work, to forcibly requisition your anxiety and fear and press them into service for creative ends. The Freudian term for this, I believe, is "sublimation". And sublimation is what I believed I was up to in pursuing my ▶





Illustrations by Yifan Wu



'As a parent, and as a person, my sense was that it might not be a great idea to wilfully submit to apocalyptic pessimism'

 obsession with the idea of the apocalypse and, eventually, writing a book about it.

I got very into doomsday-prepper videos on YouTube, and spent a great many hours watching said preppers - mostly burly American men who always seemed to be called Kyle or Brent - talking about how to weather the apocalypse through "tactical survival skills" such as water filtration, judicious stockpiling of foodstuffs, securing your home from "marauders" and so on. I lurked obsessively on forums dedicated to speculation about the prospect of civilisational collapse. I spent more time than was sensible entertaining such possibilities - ecological disaster, nuclear wars, meteor strikes, terrorist hackers wiping out the grid, global pandemics.

There is, I realise, some dramatic irony presiding over this discussion. And look, I like a bit of dramatic irony as much as the next person. But the fact is, the timing of my book's publication this month is just excessive. You wouldn't dare put this situation in a novel, because you'd be laughed out of it by even the most tolerant of readers. Last week, a delivery man arrived at my door wearing a face mask, and handed me a box from my US publisher containing 30 copies of this book, which I opened wearing a pair of plastic gloves. Every writer wants their book to be timely, but I would have been fine with a level of timeliness where, say, bookshops were still open.

Looking back at it, my apocalypse obsession

was, on one level, very much in the interest of clear-headed rational analysis. I understood, intellectually, that times of great upheaval and uncertainty give rise to a widespread preoccupation with the end of the world. But on

another level, it appeared then to be entirely irrational: these visions of catastrophe seemed as much deep emanations of my own psychic unease as manifestations of an uncertain and chaotic historical moment.

My attitude toward the doomsday preppers whose content I was obsessively consuming was a complicated one. Overwhelmingly, they were coming from a rightwing, libertarian perspective, and so their response to the prospect of civilisational collapse was to protect themselves, their families, their property. As much as the immediate danger might be from a viral outbreak or a nuclear strike, for them, the real threat always seemed to be other people, society itself.

Their vision of the world was one in which society was a fragile structure of behavioural norms that would surely give way under sufficient pressure, and the reality of human life was that, in the end, it was every man for himself. And yet, I could not help identifying with their sense of our vulnerability to catastrophe, their desire for protection from an uncertain and volatile world. Their anxiety took a different, ideologically directed course, but it was rooted in the same unease as my own.

Eventually, in the interest of furthering my own dubious project of sublimation, I decided to stand up from my laptop and go out into the world in search of manifestations of those apocalyptic anxieties. I travelled to the prairies of South Dakota, where a real estate entrepreneur specialising in luxury bunkers was attempting to create "the world's largest survival community". I went to New Zealand, a country viewed by Silicon Valley tech billionaires such as Peter Thiel as a safe retreat in the event of civilisational collapse. I did a two-day guided tour of the

Chernobyl Exclusion Zone, in the interest of seeing what a post-apocalyptic world devoid of people might actually look like. I attended a conference on Mars colonisation in Los Angeles, where people spoke of their conviction that we needed a "back-up" planet for humanity.

And I immersed myself, often to the point where I felt in danger of drowning, in the history of apocalyptic fantasies and in cultural representations of the end of the world. (I cannot tell you how many times I watched the film Children of Men during this period, but I can tell you that I have a clear memory of my wife standing in the doorway of the living room and saying, in a tone both incredulous and concerned, "Are you watching Children of Men again?")

There was, during this time, an internal conflict under way that threatened to drive me finally and irrevocably mad. As a writer, my approach to my subject was to fling myself bodily at the target, even when the target was my own anxiety. But as a parent, and as a person, my sense was that it might not be a great idea to wilfully submit to apocalyptic pessimism. It was strange, and jarring, to spend all day thinking about the end of the world, and reading about the end of the world, and talking to people who were convinced it was the end of the world, and to then try to move through my life as though it was not the end of the world.

But somehow, the process of writing the book functioned as a kind of exposure therapy. By the time I was finished, I was less inclined to project myself into the distant future, more inclined to be where I was. I was still deeply concerned about the world my children would be forced to live in - despite all my anxiety about the future, during the time in which I was writing the book,

my wife and I had a second child, a daughter but I was more inclined to live with them in the present. Writing the book had exorcised me of my apocalyptic fervour. A lot of it, certainly, if not all.

And there is, of course, another irony here. Which is that everything I wrote about the preppers, the luxury bunkers, the scenarios of civilisational collapse - have now been cast in a very different light, the light of this strange new era in which all of reality is presided over by a deadly viral pandemic. I will admit that I have taken some of those prepper books I bought for research down off the shelf these past few weeks, and flicked through them again, but in an entirely different spirit from how I last read them. The distance between myself and my subject has been radically foreshortened.

And yet, this is not the end of the world. It is not the apocalypse of the preppers and the builders of luxury bunkers. What I have seen in these last strange and unsettling weeks is not people battening down the hatches, protecting themselves and their property from "marauders", from a society devolved into chaos and violence. What I have seen is people putting their lives on hold for a collective cause, for societal as opposed to merely individualist ends.

What I have seen, in the form of social isolation, is how important community still is, and how we are all connected, not just by the vectors of viral infection, but by equally powerful social bonds. If this is an apocalypse, it is one that gives me hope for the future. Maybe I am not quite as much of a pessimist as I believed myself to be. FT

Mark O'Connell is the author of "Notes From An Apocalypse: A Personal Journey to the End of the World and Back", published by Granta



'These tahini sweets are fudgy, nutty and crumbly - perfect with a cup of tea in front of Netflix'



Photographs by Patricia Niven

y the time all this is over, we will have suffered losses. Loss of health, perhaps. Loss of time invested on derailed projects. Money will have been lost - nest eggs broken, savings eaten up. And some will have lost loved ones. But not everything is bleak in our bunker -

not yet, at least. We find there is the odd perk to living in lockdown. Here is our list:

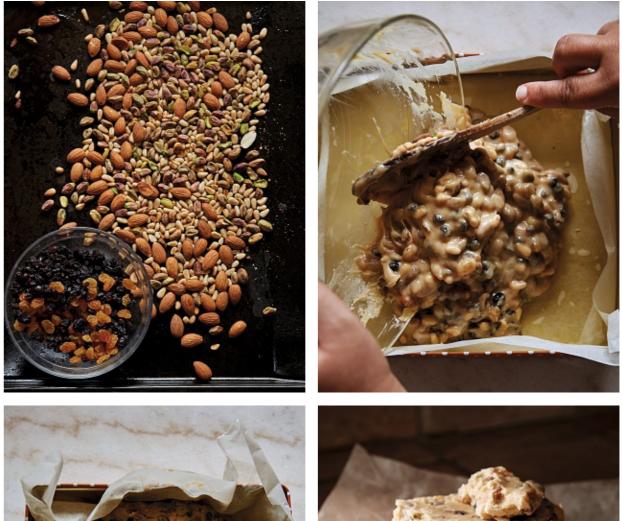
Jogging is now part of our lives. We hate running as a rule, but we still crave exercise and, with gyms closed (we hate gyms too), we put on our trainers and ear buds and hit the streets of south London for a 30-minute trot. It turns out we don't hate running any more. There is a nice park nearby that we didn't know about. Everything is starting to bloom - and the daily run absolves us of the carb guilt. What's more, we once saw Joanna Lumley on the South Lambeth Road. We have gained new friends - our neighbours. In normal times we nod a quick hello to one another on the way to work. Now we leave out care packages of excess baked goods and homemade preserves. There are handwritten notes asking if anyone needs help with shopping or apologising for the children's music lessons.

We meet up for drinks on our balconies and we are planning a summer street party. Amazing things can come knocking at your door. While the next available delivery slot from the supermarket is sometime in 2028, many people are delivering wonderful things. From doughnuts to craft beer and artisan butter, small producers will send their wares right to your door. We ordered brisket from Monty's Deli in London. It came wrapped in a little woollen jumper inside a jiffy bag and they threw in a pack of smoked beef sausages.

Deep, deep clean. From our clothes cupboards to our bookshelves, our home has never been cleaner or tidier. There is not one piece of paper out of place and our bookshelves are Instaliciously colour-coded.

These tahini sweets are fudgy, nutty and crumbly. They are great after a meal of, say, salty brisket or perfect with a cup of tea in front of Netflix. You should also make extra and take some with you on your daily jog, offer it to your local celebrity or leave it on your neighbour's doorstep. **FT**

By Itamar Srulovich. Recipe by Sarit Packer honeyandco@ft.com







How to make the most of what's in the cupboard? Itamar Srulovich and Sarit Packer host a live Q&A online on Saturday April 25 at 12pm and 5pm. Please share questions and recipes in the comments at ft.com/honeylive

Vegan fruit and nut fudge

To make a 7in square

You can substitute any fruit and nuts, and use honey or golden syrup instead of the pomegranate molasses But this is what we used.

- 300g sugar
- 80g whole pistachios
- 80g whole almonds
- 40g pine nuts
- 200g tahini paste
- 2 tbs pomegranate molasses
- 80g golden raisins
- 80g dried currants

1 — Place the sugar in a small saucepan and moisten with water to form a paste. Set on a high heat, bring to a boil and cook for five minutes or until the hubbles become nice and thick but haven't started to colour yet. (If you have a sugar thermometer, you want to cook the syrup to "soft ball" stage.)

2 — Toast the nuts in a hot oven (200C fan assist) for seven minutes so they are hot when your sugar syrup is ready.

3 – Put the tahini and the pomegranate molasses into another small pan and warm carefully so it turns very liquidy. Then transfer to a large mixing bowl. Meanwhile, line a square tin with baking paper.

4 — As soon as the sugar has thickened, pour it carefully into the tahini, give it a gentle stir, then add the warm nuts and the dried fruit. Mix again As soon as the mix starts to thicken, tip it into the square tin. Lay another sheet of baking paper on top and press flat with the base of a pan or a jar. Leave to cool entirely in the tin, break into shards and serve. They can be kept covered in a tin at room temperature for a few days.

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Jancis Robinson Wine

All in the family business

here is no shortage of people who think they changed the world of wine for ever. There are very few who really have. But Robert Mondavi of Napa Valley in California was one of them.

For 40 years, he made it his business to draw together what were then called the New and Old Worlds of wine, ceaselessly travelling, tasting and refining his company's winemaking techniques. Long before his death in 2008 at the age of 94, he put California on the world wine map. He wooed Baron Philippe de Rothschild of Bordeaux to make a tip-top Napa Cabernet, Opus One, with him. He dared the most influential commentators to taste Robert Mondavi wines alongside the greatest in the world.

The other thing that defined him was family strife. He founded his eponymous winery in 1966 after quarrelling with his younger brother Peter over policy at the family's Charles Krug winery. In 2004, disagreements between Robert and his children contributed to the Robert Mondavi Winery falling into the hands of Constellation, one of the world's biggest wine companies and one with a very different ethos. His sons, Michael and Tim, went their separate ways, though each produces classic California wine in the form of a ripe, dense Napa Valley Cabernet.

Two years ago, I suddenly heard from someone called Carlo Mondavi who wanted me to taste some very different wines – the lean, fresh Sonoma Coast Pinot Noirs that he and his younger brother Dante make under the Raen label. Email correspondence suggested Carlo was a communicative chip



As imagined by Leon Edler

off the Robert block, even if his concerns are very different from those of his beloved grandfather.

When we met properly over brunch in Napa Valley in February, he said that he mostly remembered how "happy and kind and sweet" his grandfather was, adding: "He always said the biggest risk is not taking a risk at all."

Carlo, now 39, is the third of Tim's five children and the eldest son. He has certainly had his time in the risky wilderness, including a grapebased skincare venture. His biog features periods of study but by 23 he was a professional snowboarder who was strapped for cash.

The family rule was that you could only be employed by

'By 23, Carlo Mondavi was a professional snowboarder who was strapped for cash'

Robert Mondavi Winery if you had graduated and could prove you were better than any other candidate for the job. When the family company was sold, Tim, who had been head winemaker for his father, started his own Continuum wine estate. His daughter Chiara, one of Carlo's older sisters, is now winemaker at Continuum, and both Dante and Carissa, who is the eldest, also work for their father. Carlo admits to having been the black sheep of the family.

It may have taken time for wine to flicker into Carlo's professional life but he claims that a low flame was lit back in 2002, when Robert took the family on a grand tour of some of Europe's greatest ►

The Mondavi connection

California wine producers from the extended Mondavi family with year of foundation

- Charles Krug (1861) Acquired by the Mondavi family in 1943 and now run by Peter's sons Marc and Peter Jr with two of Marc's daughters Angelina and Riana
- Robert Mondavi Winery (1966) Owned by Constellation since 2004
- Opus One (1978) Joint venture between Robert Mondavi Winery and Baron Philippe de Rothschild of Bordeaux
- Arnot-Roberts (2001) New-wave partnership between Duncan Arnot Meyers and Nathan Lee Roberts, grandson of Robert Mondavi's second wife Margrit Biever whose paintings adorn their labels
- Michael Mondavi
 Family Estate (1999)
 Napa Valley vineyards and brands now run by Robert's eldest son and his children
 Rob Jr and Dina alongside their import company
 Folio Fine Wine Partners



Tasting notes on Purple Pages of JancisRobinson.com. International stockists on Wine-searcher.com.

- Continuum (2005) Napa Valley estate owned by Robert's two other children Marcia and Tim and now employing three of Tim's five children - Carissa, Chiara and Dante
- Fourth Leaf (2008) Blends from both branches of the family's vineyards overseen by Robert's grandson Rob Jr and Peter's granddaughter Angelina
- Aloft (2008)
 Mountain Cabernet involving Marc's four children Angelina, Alycia, Riana and Giovanna
- Raen (2013) Sonoma Coast enterprise run by Tim's sons Carlo and Dante with Kiwi Melanie McIntyre as associate winegrower
- Revik (2016)
 Founded by Phil Holbrook,
 another of Margrit's
 grandsons, whose labels
 also feature her artwork.
 Phil interned at Raen

✓ wine producers. He wanted to show them what had inspired him 40 years earlier, when he decided he wanted to "make wines that belong in the company of the finest in the world". Touring Burgundy, Carlo happened to be driven by the late biodynamic viticulture pioneer Anne-Claude Leflaive of Domaine Leflaive in Puligny-Montrachet. He says that this journey - discussing vine-growing and ecology - changed his life, even if the fuse was a slow burner.

Today, having absorbed Leflaive's philosophy, Carlo is focused on environmental matters, in addition to the Sonoma Coast project in which he does the talking and Dante makes the wines. Three years ago he launched the Monarch Challenge, an ambitious attempt to rid Napa and Sonoma of all herbicides especially Roundup and other glyphosates - so that they become models of truly "clean farming".

His current pet project is arguably even more ambitious: the development of a smart electric compact tractor. "I basically realised that we have to find a way to farm economically and sustainably. The argument against organic farming is economic, so I thought an electric tractor might do the trick." Carlo is working with a team of software designers involved with Lyft and Tesla, plus an agricultural robotics specialist. Pre-pandemic, they were poised to release their first 30 tractors for beta testing.

The tractor doesn't use fossil fuels and it can be programmed to do essential but routine jobs in the vineyard. It is designed to monitor sugar and pH levels in grapes, for example, and to do all the work that needs doing now that the skilled Mexican labour force, on which California depends, is shrinking. Mondavi claims that these tractors could make environmentally friendly, organic and biodynamic farming cost the same as the conventional sort and could, for example, save Gallo, the world's biggest wine producer, \$14m a year on labour costs.

The first time I clapped eyes on Carlo, I would have known him anywhere as a Mondavi, with the same exaggerated Roman nose and lantern jaw as his father and grandfather. I was dining at Angèle, a popular French bistro in the city of Napa, when Carlo loped over to give us a taste of Robert Mondavi 1984 Pinot Noir. Making a sufficiently Burgundian Pinot Noir from California grapes had been his father Tim's passion and, when we met later, Carlo explained that this partly inspired the focus of his and Dante's label Raen.

Today, Raen is made in a space they share with eight other smallscale wine producers. Their father's Continuum winery in Napa Valley would have been an obvious place for them to make their relatively few barrels of Raen wines, I suggested. "Yes, Continuum would have been perfect," Carlo acknowledged ruefully. "But my dad said no. Tough love."

More columns at ft.com/ jancis-robinson







Our daily bread

Hot and slathered with salted butter or cold and blackened to a crisp, toast is much loved by the British but it is also an unlikely point of conflict, writes *Tim Hayward*. Photograph by *Louise Hagger*

know we're all supposed to be making sourdough in lockdown. It's become a sort of rite of passage, a way we can demonstrate compliance with government guidelines, our respect for traditional foods, have something amazing for lunch and get a great shot for Instagram. A carbohydrate hasn't been this popular with the middle class in a decade. It's trending like crazy.

In the past weeks, such unlikely bakers as Adrian Chiles and Nadine Dorries have been demonstrating their culturing credentials. Good luck to them! There are few things as balm-to-the-soul as turning out your own loaf - lofty, crusted and golden with promise. And it's good to spread the love, to teach people the simplest and most profound of kitchen skills. But are we all subtly missing the point?

Bread may be our national staple, a cultural touchstone and the staff of life but it's still a faff and only a small number will ever make it. Toast, on the other hand ... Everybody makes toast and everybody loves it. I'm using my current incarceration to finish a book on bread and the ways we eat it, so toast is very much on my mind. The British, usually so polite, reticent and accepting about food, have uncharacteristically personal opinions about toast and all seem prepared to express their own with the frenzy of the zealot. We are as obsessed with toast as the Italians are with pasta or the Spanish with ham and it is now, locked down with our families, that we are forced to recognise how

little our predilections align. Do you agree with any single other member of the family on toast?

The first point of conflict is colour. My father believed toast should be blackened, "so he could taste it", while I always favoured a light blond. Now I'm mellowing, I understand the old man more. I still stop short of the fully carbonised, but I've developed, too late, a respect for many of his life choices.

I believe toast must be served hot and rushed to my plate. I even have a pair of special tongs so I can lift the bread from the toaster without scalding my fingers on the rising steam. The point is for the butter (salted, natch) to melt into, on to and over the sides of the slice.

Some, though, prefer their toast cold. This, I'm convinced, is entirely

about class, as so much British food is. If you dine far from the kitchen and staff have to bring the toast to the table, then you will grow accustomed to cold toast. Cold toast is the stuff of stately homes and grand hotels, boarding schools and the officers' mess. Hot toast is the democratic privilege of any who have to eat close to the fire. If you're toasting your bread over flames, even if they're provided by a gas ring and an irregularly fed meter, who would not prefer their toast hot?

If toast is to be carried about cold, it is best held in a specially constructed rack, so it at least doesn't go soggy, which is why Friedrich Engels employed the toast rack as the exemplar of "False Social Consciousness" in his 1893 letter to Franz Mehring... or he would have done, had he not been smearing Anchor on a hot slice of granary at the time and got distracted.

Consider Marmite, one of our longest surviving food brands, whose sole raison d'être is toast. The British are similarly unique in our love of marmalade, which has a

'The British are as obsessed with toast as the Italians are with pasta or the Spanish with ham'

symbiotic relationship to toast that morally precludes its use on scones. Most of us have a single appliance in our kitchens specifically designed to toast sliced bread. Is it any wonder we have failed to find common ground with the rest of Europe, who just use a grill?

We are united in our passion for toast and yet now, banged up with our nearest and hitherto reasonably dear, we risk the breakdown of families... over toaster etiquette.

You slink down in the morning, drop in the vital slice, turn your attention to the coffee and it's only the smell of burning that warns you. You dive, cat-like to the toaster, but it's too late. The smoke alarm has gone off and you realise with soulsapping certainty that some bastard has been at the knobs.

Don't make sourdough, make toast. Eat it hot, preferably standing next to the toaster, with unabashed joy and maybe a tea towel to catch the drips. Negotiate and compromise with your loved ones on the tough issues, remain calm, stay indoors... but keep your bloody hands off the controls.

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Rowley Leigh Recipes



Heavenly haddock

ne of our most popular dishes at Kensington Place was a salad with smoked eel draped over some curly endive, placed under a grill and then lightly dressed with a garlicflavoured butter sauce

and finished with a lot of chopped crisp bacon. We had a steady supply of eels. A rotund chap in a trilby called Derek turned up from Fenland every Thursday with a box of them, whole in their leathery black skins, all neatly wrapped in white paper. The cooks quickly learnt how to fillet and trim them, slice them in long thin strips and cover them ready for service. It was one of those steady dishes, always selling quite well but not overwhelmingly; the word "eel" worked its magic in deterring a good few.

It became a bit of a classic – and then sort of dropped out of the reckoning and didn't make the cut in either of my cookery books. Time for a revival, I thought. But the supply lines are not what they used to be and many ingredients are proving more than a little difficult to find.

The photographer Andy Sewell is seeking them out in Hackney. They've got no eel but they do have smoked haddock. At the other end of the telephone line - I am instructing him from Somerset - I think that might work. But then there is no curly endive. The only member of the chicory family available is good old Belgian endive, in plain old vanilla and in pink. Buy both I say - and then hang up to ponder a little. I drift away from the smoked eel job. I keep the bacon but decide a poached egg is in order. I end up with a brunch dish. Brunch is not really my thing - why have breakfast when you could be having lunch? - but we live in strange days.

More columns at ft.com/leigh

Smoked haddock and endive salad with bacon and egg

Raw smoked haddock is a fine thing – and it really must be the undyed sort – but it needs the help of a squeeze of lemon and a little crunch from the endive. Serves four.

- 200g-300g undyed
- smoked haddock,
- in a single piece • 120g streaky bacon
- 4 endives, red and white
- 2 lemons
- •1 tsp maple syrup,
- sugar or honey
- 2 tbs olive oil
- 2 tsp Dijon mustard
- ½ tsp salt
- 1 tsp cracked black pepper
- •1 tbs sherry or
- white wine vinegar
- 2 tbs cream,
- single or double
- 2 tbs olive oil
 4 very fresh eggs
- ½ bunch of chives,
- or two spring onions, finely chopped

1 — Rinse the haddock and, if fresh, wrap in film and freeze for one hour. (This will make it easier to slice.) Lay the bacon on an oven tray, add a splash of water and place in a medium-hot oven (180C) for 15 minutes or until very crisp. Drain on kitchen paper to dry and remove excess fat. When cool, chop the bacon very finely to make a crumb, or "bacobits".

2 — Remove the haddock from the freezer, lay it flat on a board and slice as thinly as possible, almost parallel to the board, to produce the longest possible slices. Cover the slices with film.

3 — Split the endives into four and cut away the stalks to separate the leaves. Drop in very cold water, drain and spin dry. Dress these leaves with the juice of one of the lemons, maple syrup and a good seasoning of salt and black pepper before tossing in the olive oil. Lay the leaves out in the oven tray in which you cooked the bacon (without the fat). Place the endives in the same oven for five minutes so that they just start to wilt on the outside but the centres are still criso.

4 - Whisk together the Diion mustard, salt, pepper, vinegar and cream before adding the olive oil to make a creamy dressing. Fill a small but deep saucepan with boiling water. Break the eggs carefully into four little cups. Add a tablespoon of vinegar to the water and bring it to a rolling boil. Slip the first egg into the water where it is bubbling the most and wait for it to surface and for the water to come back to the boil, then slip in the next egg, and so on. Remove the first egg on to kitchen paper as soon as it feels that the white has set but the yolk is still runny. Continue until all the eggs are cooked. Leave the water at a simmer.

5 — Dress the endives on four plates. Drape the slices of haddock over the leaves and squeeze over the juice of the second lemon. Place an egg on top and coat them in the creamy mustard dressing. Sprinkle copiously with the bacon crumbs and then also with chives or spring onions.

Wine

Not an easy one as both egg and endive can be unkind to wine. A rich style of Alsace Riesling with a little residual sugar or a Loire Chenin blanc in the same style would be ideal if esoteric for these times.



NOW AND THEN: AN FT FAMILY QUIZ

Members of every generation can test themselves against our regular guizmaster James Walton's brain teasers. The answers (should you need them) are on page 44. Illustration by Adam Howling

family bickering,

Even if the work had

years ago, when the

subject was timely, I

don't see that there

would have been

a chance for it"?

7. In the TV show

the name of Ross

and Rachel's child?

8. In Shakespeare's

Hamlet, Polonius

has two children:

Laertes - and who?

9. Which celebrities

four sons called Kai.

Klay, Kit and Cass?

top of the world"?

are the parents of

Friends (below), what's

come to light five



PART ONE: NOW

ROUND ONE **PARENTS AND CHILDREN**

1. In the climax of a film from 1970. which actress speaks the line, "Daddy, my daddy"?

2. Who was the last British monarch to have been the parent of more than one other monarch?

3. In later life, who described the poem "Vespers" - written about him by his father, and beginning "Hush! Hush! Whisper who dares!" - as "a toe-curling, fistclenching, lip-biting" source of shame?

4. In the nursery rhyme beginning, "Monday's child is fair of face", what is Friday's child?

5. In the UK, at what age can children legally drink alcohol?

6. Which book which went on to become the bestselling ever by a writer under 18 - was turned down in 1950 by one American publisher, who described it as: "Very dull. A dreary record of typical

ROUND TWO **STAYING IN - TV, READING AND GAMES**

burn, according to

the title of a novel

by Ray Bradbury?

7. Which two girls'

names made up

problem page in

Jackie magazine?

only British national

newspaper to back

a leave vote in the

1975 referendum

on staying in the

9. Books Do Furnish

a Room was the

10th in which 12-

Anthony Powell?

novel sequence by

10. The musical Chess

had music by Benny

and Biörn from Abba -

and lyrics by whom?

European Community?

8. What was the

the title of the

1. Between 1996 and petty annoyances and 1999, the Saturday morning children's adolescent emotions. show Live & Kicking was presented by Zoë Ball - and who?

> 2. On a traditional London Monopoly board (below), which property comes last alphabetically?

3. Modern Warfare is the latest version of which videogame franchise?

4. TV weatherman Phil Connors is the main character in which 1993 film?

> 5. The name of which type of toy also means "I read" in Latin?

10. In the climax of 6. At what a film from 1949. temperature do books which actor speaks the line, "Made it ma,



ROUND THREE **A SPELL INSIDE**



Mubarak (above)

of which country?

6. Which alcoholic

the blue agave plant,

7. In 1998, Washington

National Airport was

renamed after which

former US president?

"Guigsy" McGuigan

and Paul "Bonehead"

original members of

which band, along

with two brothers?

9. In 2008, which

bank filed for the

largest bankruptcy in

American history?

10. Which Puccini

opera concerns the

tragic love story of

Mimi and Rodolfo?

FT.COM/MAGAZINE APRIL 25/26 2020

Arthurs were the

8. Tony McCarroll, Paul

drink, made from

is named after a

Mexican town?

resigned as president

bic polymer polytetrafluorethylene?

British woman to win an Oscar for Best Actress?

in the world, after China. India and the United States?

4. Which element is third in the periodic table, after hydrogen and helium?

5. During the Arab Spring of 2011, Hosni

PART TWO: THEN

ROUND FOUR **SCHOOLS**

1. The characters in which play include Mr Hector and Mr Irwin, teachers at Cutler's Grammar School in Sheffield?

2. The headteachers of which fictional school have included Mr Llewellyn, Mr CJ Humphries and Mrs Bridget McCluskey?

3. Which literary character goes to Lowood school, where her friend Helen Burns dies of consumption in her arms?

4. Which fictional school created by the cartoonist Ronald Searle featured in seven films between 1954 and 2009?

5. Which 1978 film musical was



High School? 6. Which hit TV series of the 21st century was set at William McKinley High School

> in Lima, Ohio (below)? 7. Who is the current secretary of state for education?

8. Between the UK general elections of 1964 and 2010, who was the only privately educated prime minister?

set at Rydell

9. At which fictional school do the pupils include Danny, Plug and Cuthbert Cringeworthy?

10. Which novel of 1961 takes place at the Marcia Blaine School for Girls in Edinburgh?

42

The first letters of

the answers to this round, in order, spell out a word or phrase associated with the current circumstances

1. What's the common name for the hydropho

2. Who was the last

3. Which country has the fourth highest population

ROUND FIVE **GOING OUT - SPORT, PUBS** AND PUBLIC ENTERTAINMENT

1. What's the biggest British city with only one football team?

2. The art galleries in which British city include the Bluecoat, the Walker (above) and the Tate?

3. Which novel opens at the Admiral Benbow inn?

4. What's the name of the only pub in Ambridge?

5. Which Yorkshire theatre shares its name with the winner of the 1953 Tony Award for Best Play?

6. Which band are named after the villain in the film Barbarella?

7. The comedian Bernard Manning performed at the opening of which influential nightclub in 1982?

8. Which two ballroom dances feature in the Nato phonetic alphabet?

9. Which French artist produced about 1,500 works featuring ballet dancers?

10. The town of Rugby is in which British county?

ROUND SIX **TRAVELLING AROUND**

Each of the answers here contains a British place name

1. Who's the only human title character in a tale by Beatrix Potter?

2. Who's being described here? He moved from South America to Britain in 1958, settling in Notting Hill; he had his own TV series in the 1970s but didn't appear on the big screen until 2014

3. What's the capital of Nebraska?

4. Which annual sporting event took place for the first time on May 4 1780?

5. Who was the British foreign secretary at the outbreak of the second world war?

6. Which regular panellist on Radio 4's I'm Sorry I Haven't a Clue co-wrote two Morecambe and Wise (right) Christmas shows?

7. What's the surname of the character in Oscar Wilde's

The Importance of Being Earnest, whose first name is Ernest in town and Jack in the country?

8. What was the name of Donald Trump's first book?

9. Which actor played Philip in the 1970s sitcom Rising Damp, and now plays the police commissione in Death in Paradise?

10. Northern Ireland's **Democratic Unionist** party was co-founded in 1971 by Desmond Boal - and who?





ROUND TWO

ACTING OUT

The first letters of the

three answers in each

Once you've solved them,

please act out the word ...

1. A: Which cartoon explorer

has a helper called Boots?

C: In the song "The Twelve

Days of Christmas", what

are the five rings made of?

The Great British Bake

Off with Noel Fielding?

B: Warsaw is the capital

C: Which website has the

logo of a white triangle in

of which country?

set spell out a word.

B: What colour is

2. A: Who presented the last three series of

a satsuma?

AND TWO ROUNDS FOR YOUNGER QUIZZERS... (ALTHOUGH ADULTS CAN HELP)

ROUND ONE ORDER, ORDER

Once you've answered the three questions in each of these sets, can you place them in the right, normal or ascending order?

- A: Which TV channel is Strictly Come Dancing on?
 B: In which story would you find Goldilocks?
 C: How many people sing or play in a duet?
- 2. A: Which group sang "Bohemian Rhapsody"?
 B: Which African-American leader gave a famous speech called "I have a dream"?
 C: Which fairy-tale character sold his mother's cow for a handful of beans?
- 3. A: On which day of the year do people play practical jokes on each other?
 B: What word for the way soldiers walk is also the surname of the family in Little Women?

C: Who was the prime minister before Boris Johnson?

- 4. A: Jade, Perrie, Leigh-Anne and Jesy are the four members of which band?
 B: What kind of crocodile did Roald Dahl write about?
 C: What name is given to animals such as lions, tigers, leopards and panthers?
- 5. A: What building does the American president live in?
 B: Which TV programme is presented by Richie Driss and Lindsey Russell?
 C: Which colour comes first in the rainbow?
 - a curved red rectangle? **3. A:** What is the front part of your hand called? **B:** Which country do you first come to if you head west across the sea from Wales?

C: Which prince is the oldest child of Prince William and his wife Kate?

- 4. A: What other fruit is an anagram of "lemon"?
 B: Which British tennis player has won the men's Wimbledon championship twice in the past decade?
 C: What type of bird has the same name as the surname of a famous Victorian nurse?
- 5. A: Which fictional character said, "Please sir, I want some more"?
 B: What's the surname of the writer of *The Story* of *Tracy Beaker*?
 C: Which football team was top of the Premier League when football stopped because of coronavirus?

(The R rge V (Edward \leq George VI) 3. . P of AA _oving and giving 5. Five (at 451 7. 10

James Walton is the author of the Penguin Book Quiz (£9.99)

PICTURE QUIZ: DOUBLE ACTS

Can you match the five pairs of singulars and plurals in the names of the following people?



Games



A Round on the Links by James Walton



4. Who was the MP for

Tooting from 2005 to

2016, before taking up

another political post?

5. What do new-born

babies (above) have

nearly 100 more

6. Who wrote The

of Baby And Child

Care, one of the

Common Sense Book

biggest selling books

of the 20th century?

7. Who was the Roman

forms part of dozens of

British place names?

god of fire (right)?

8. Which Scottish

word for "church"

9. Which band's

biggest hits - both

of than adults?

in the 1980s - were

"We Built This City"

10. Which currency

Stop Us Now"?

was introduced

in 1961 to replace

pounds, shillings

and pence - with

in Afrikaans?

the aid of a mascot

called Daan Desimaal

and "Nothing's Gonna

All the answers here are linked in some way. Once you've spotted the link, any you didn't know the first time around should become easier.

1. What did NEB stand for in the name of a body set up by the Labour government in 1975 to extend public control and ownership of the economy?

2. Which brand of crisps was launched by KP in 1985?

3. Which 1942 film starring Bette Davis, Paul Henreid and Claude Rains takes its title from a poem by Walt Whitman?

The Picture Round by James Walton

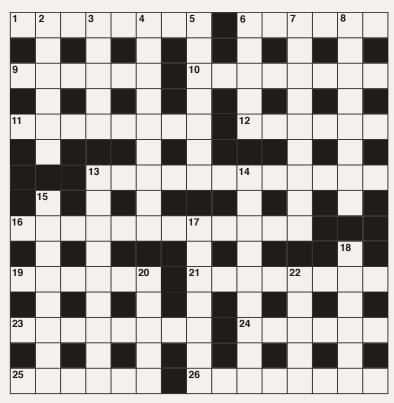
Who or what do these pictures add up to?



Answers page 10

+ =?

The Crossword No 485. Set by Aldheim



The Across clues are straightforward, while the Down clues are cryptic.

ACROSS

1 Crucial, essential (8) 6 Help (6) 9 Buddhist tower (6) 10 German airship (8) 11 Mammal with scales (8) 12 Bury (6) 13 Legal matters concerned with property buying and selling (12) 16 Lamb and mashed potato dish (9, 3) 19 Frontage (6) 21 Closet (8) 23 Closing (8) 24 Ancient Britain (6) **25** Of the stars (6) 26 Refashion (8)

DOWN

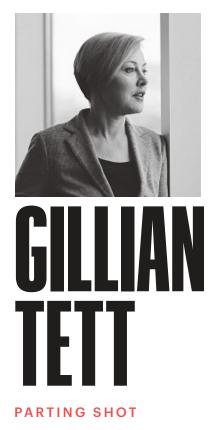
2 Old president getting about again after lack of interest, initially (6)

3 Band taking part in marathon gig (5) 4 Child has poor grade after taking complete English test (9) 5 Look at Buddhist type, say, lifting tablet (7) 6 Take enough from samples (5) 7 Show accepts changes with heads of light entertainment (9) 8 Load of trendy chaps in the street (8) 13 Top type of current current peak for electrical device (9) 14 Conjunction of Mars and Pluto, initially, swirled with energy (9) 15 Famous trophy has been swapped with these (3, 5)

17 Aristocratic lady's party's to swing with the Queen (7)
18 Go up, taking in most of fair shape (6)
20 Shakespearean character's the second character in *King Lear*, perhaps (5)
22 Puzzle's sure to be convoluted without a bit of brainpower (5)

Solution to Crossword No 484





How much should it cost to contain a pandemic?





ver the past week, protesters across the US have held demonstrations to demand "liberation" from lockdown measures brought in by states to contain the spread of the Covid-19 virus.

Fuelled by a belief that the economy must reopen to protect the health of people's businesses, these public gatherings (often attended by anti-vaxxers and farright activists) make for colourful

television pictures – and divisive social media messages that President Donald Trump has been only too happy to promote. But as these protests swell, sparking counter-protests from America's medical establishment, the issue raises an intriguing question: is there a limit to how much containing a pandemic should cost?

Many of you - including doctors - might howl "No!" to such a notion. Certainly, the value of a human life cannot be measured only with economics. And Covid-19 is so new that it is hard to model its trajectory. In New Zealand, however, one of the country's leading think-tanks has ventured into this moral minefield.

In "Quantifying the Wellbeing Costs of Covid-19", a research note written for the pro-free-market New Zealand Initiative and published earlier this month, Bryce Wilkinson sets out to examine some of the fiscal trade-offs around coronavirus when it comes to health, wellbeing and cost. Whether you agree with his approach or not, the results are worth reading.

First, Wilkinson's work suggests that there is indeed a sensible limit to action – albeit a high one. Using existing research (undertaken in 2017) into what might happen if a 1918-style pandemic were to hit New Zealand, he has updated this framework for Covid-19 alongside gross domestic product figures.

Wilkinson's conclusion? That the New Zealand government could justify spending up to 6.1 per cent of GDP on pandemic-fighting, if it were to save 33,600 lives (the number of deaths projected by the country's Ministry of Health if the pandemic was uncontrolled).

It could also justify spending 3.7 per cent of GDP to save 12,600 people (the projected outcome if the pandemic was brought under control more quickly). However, Wilkinson concludes: "To spend more [than these sums] begs the question of whether more lives could be saved over time if the money went instead to make safer roads and buildings, or perhaps spent on other health services." And while he stresses the results are "highly conditional" and his report "a contribution to public debate, nothing more", Wilkinson believes "evaluating this trade-off is essential for good policy advice and decision-making, such as lockdown decisions and border closures".

Now, as it happens the New Zealand government itself has managed to avoid

the darkest implications of such trade-offs. When the coronavirus erupted, it announced a stimulus package worth 4 per cent of GDP (although Wilkinson predicts this will rise). But the government put the country into such an effective lockdown that the death toll currently stands at just 13. The country's prime minister Jacinda Ardern now says that New Zealand has "done what few other countries have been able to do" in stopping the spread of the virus and is preparing to ease controls.

Another interesting point is raised by Wilkinson's paper: why are so few other economists trying to calculate these trade-offs in such an explicit way? The obvious answer is that it would seem to breach all kinds of political and

'In many cultures, it is commonly supposed that life is sacred and cannot be valued with mere money'

cultural taboos. After all, taboos are powerful because they reveal ambiguities we prefer to ignore. And in many cultures, it is commonly supposed that life is sacred and cannot be valued with mere money – even though this is what governments implicitly do every day. Discussing morbidity trade-offs makes voters wince in horror.



so too if Steve Mnuchin, the Treasury secretary, were to lecture us on "flattening the curve" of death. This is unsurprising: it takes years of training to become an expert. But here is the rub: almost all of the important decisions in modern democracies require this "silo-busting" analysis. Without this it's impossible to discuss the tradeoffs around pandemics, or anything else.

So I salute Wilkinson for publishing his speculative models – however contentious – and I wish others would do the same, including national treasuries, which must make their own private calculations of such trade-offs. Taboo or not, these numbers could at least spark proper democratic debate. In these troubled times, that's something we badly need.

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PREPARE THE NEXT GENERATION FOR THE WORLD AHEAD

, com

12+6

3×6×/2

K+M×J+I

27

20

12-17

723

(X+3)"

+7=2

1>0

X

2=45 W

6

=72+62

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FINANCIAL

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TIMES

W/D

"By far the most useful resource for enriching my knowledge"

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A different perspective

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