now need to "invest in the testing economy", for example to establish who can safely return to work and to monitor workplace safety. "Countries and regions that were able to test, trace, and then isolate the infected were able to contain the virus quickly and reopen their economies sooner", he points out - in a ringing endorsement of World Health Organization policy. Even with a vaccine, he says, testing is likely to be a part of our daily lives for many

He also offers a useful discussion of how to optimally allocate a vaccine when it has not been produced in sufficient quantities for all (although he does not go into the issue of people refusing it, which is likely to be a problem). And he considers how innovation in vaccine development can be motivated without reliance on market forces and patenting of what is so clearly a global public good. There is previous discussion he might have drawn on here about the development of urgently needed drugs and treatments that seem unlikely to generate profits for pharmaceutical companies, such as new antibiotics and treatments for tuberculosis.

As others have done after previous outbreaks, Gans advocates establishing a pan-national institution with a "set of resources to contain future pandemics and ensure an international, harmonized response". More like the International Monetary Fund than the WHO in his vision, this would focus not just on drugs but also on innovations to enhance protection from infection at work and on public transport. He calls "hundreds of billions of dollars per year to mitigate substantially the risk of global pandemics" a no-brainer, echoing those after the first Ebola outbreak who drew parallels with defence spending.

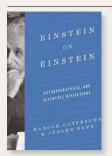
Here, the book stops short, Realistically, Gans's word was always going to be the first, not the last. But he paints a picture of a post-COVID-19 world that is largely back to normal, with some inconveniences. The truth is that the pandemic throws much more into question. Whatever landscape emerges, it is unlikely to be same as that at the end of 2019.

There is a moral case for rethinking inequalities in light of what we have learnt about who is truly essential for society's functioning. Some aspects of neoliberal economic policy are fundamentally in conflict with the needs of a fragile world, with greater risks to come. The behaviour of some leaders has pointed out the dangers of an information economy that has become a 'marketplace for truth'. And economics itself must incorporate the revision of past preconceptions and habits that will be demanded of the rest of us.

Philip Ball is a science writer and author based in London. His latest book is How to Grow a Human.

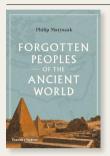
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Books in brief



Einstein on Einstein

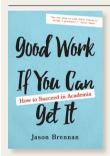
Hanoch Gutfreund & Jürgen Renn Princeton Univ. Press (2020) Albert Einstein admitted in his final essay, 'Autobiographical sketch', that fellow physicists opposed his quest to unify the general theory of relativity with quantum mechanics. But he took comfort from philosopher Gotthold Lessing's dictum: "The search for truth is more precious than its possession." The 1955 work appears in English for the first time in this outstanding study of another essay, which Einstein called his "obituary": 1949's 'Autobiographical notes'. Physicist Hanoch Gutfreund and historian Jürgen Renn provide a sparky commentary.



Forgotten Peoples of the Ancient World

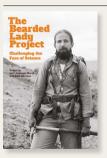
Philip Matyszak Thames & Hudson (2020)

Western ideas on antiquity are dominated by Egyptians, Babylonians, Assyrians, Hebrews, Greeks and Romans, with other cultures often reduced to stereotypes. Historian Philip Matyszak asks: were the Philistines philistines and the Vandals vandals? His stimulating encyclopaedia of 40 "forgotten peoples" begins with the Akkadians around 2330 BC and ends with the Hephthalites ('White Huns') in the fifth century AD. Illustrations include a Roman-style Vandal mosaic; far from vilifying Roman culture, the Vandals respected it, say current historians.



Good Work If You Can Get It

Jason Brennan Johns Hopkins Univ. Press (2020) Economist and strategist Jason Brennan delivers a data-driven, punchily practical guide to succeeding in academia, aimed at PhD students. He knows how success requires narrow professionalism, but he also networks widely. And if a PhD does not yield an academic job, all is far from lost. "Faculty jobs are the nail for which the PhD is the hammer," he concludes in the chapter 'Exit options'. Yet the hammer can be repurposed for diverse non-academic jobs: the US unemployment rate for PhD holders is just 1.7%.



The Bearded Lady Project

Eds Lexi Jamieson Marsh & Ellen Currano Columbia Univ. Press (2020) "Many of our Bearded Ladies became professional palaeontologists because they did not want to spend every workday inside, in an office, behind a desk," writes palaeobotanist Ellen Currano, co-founder of the Bearded Lady Project with film-maker Lexi Jamieson Marsh, in their photo-biography of a weirdly compelling collaboration. It began six years ago, out of despair at male dominance of their professions. "Maybe I should sport a beard," Currano joked. Dozens of female geoscientists have now posed, artificially hirsute.



Bite Back

Eds Saru Jayaraman & Kathryn De Master Univ. California Press (2020) In this cleverly titled collection, attorney Saru Jayaraman and rural sociologist Kathryn De Master conclude that corporations control much of our food because of "their unbridled, unregulated power over our democracy". Articles on seeds, labour, hunger and more describe calls to action and collective response, such as mobilization of New York state residents to force a ban on fracking, because of its potential to harm farms. Only direct public confrontation with corporate food elites will succeed, the editors argue. Andrew Robinson