

organization, a group of nuclear scientists who promoted disarmament, to demonstrate the virtues of independent Western science.

Another avenue for politicizing science was education. In the early 1960s, the CIA, through a wide-ranging Asian–American partnership called the Asia Foundation, supported the high-school Biological Sciences Curriculum Study (BSCS). This taught pupils to ask their own questions, make their own observations and come to their own conclusions. Translations of the BSCS were promoted internationally and ultimately used in 35 countries. “Lysenko’s name is never stated explicitly in these texts,” writes Wolfe, but the “emphasis on rejecting received knowledge” is implicit throughout.

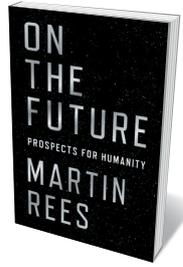
In 1967, the CIA’s involvement in “youth groups, organized labor, cultural organizations, and private foundations” such as the Asia Foundation became public. Amid uproar, the administration of US president Lyndon B. Johnson announced the end of covert CIA support of private institutions. Some scientists were chagrined by what they saw as a cynical use of science in propaganda. The programmes, dubbed “CIA orphans”, could not be overtly re-funded by the government or foundations. So the government looked for 100 “private voluntary organizations that ‘did the kind of work’” the orphans had done. The Asia Foundation ended up being funded by the State Department.

With covert shenanigans suspended and the US government out of the “hearts and minds” business, the focus of the conflict between free and state-approved science moved to Soviet dissident scientists, including nuclear physicist Andrei Sakharov, who campaigned for human rights and was later arrested. Now scientists on both sides were acting not as agents of states, but as individuals — writing letters, raising funds, boycotting, signing petitions, lobbying, protesting. “By 1980,” Wolfe writes, “there was only one ‘science’ and it looked remarkably like the vision advanced by the West.” Sakharov was freed in 1986, the Soviet Union collapsed in 1991, and the cold war was over for good.

How, in hindsight, to assess this history? Were the scientists who worked knowingly or unknowingly with the government either collaborators or dupes? Cold-war history, Wolfe writes, is not a heroes-and-villains narrative: it must be told in “shades of gray”. The government used scientists’ ideals for its own political reasons. And the scientists, who saw themselves as apolitical, used the government’s political messages and support to question, observe, conclude, write and speak — freely and in accord with their ideals. ■

Ann Finkbeiner is a freelance science writer in Baltimore, Maryland, and author of *The Jasons*. She blogs at www.lastwordonnothing.com. e-mail: anniefk@gmail.com

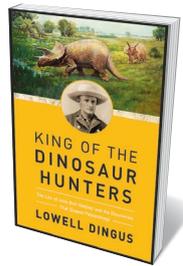
Books in brief



On the Future

Martin Rees PRINCETON UNIVERSITY PRESS (2018)

UK astronomer royal Martin Rees faces the future as scientist, citizen and “worried member of the human species”. His bold, beautifully synthesized primer paces from human-driven challenges such as climate change to dizzying astronomical discoveries within and beyond the Solar System. Rees celebrates technological advance, but warns of the potential for abuse, reminding us that the benefits of progress can dim in the face of inequity and natural catastrophes. And he argues that a yen for Martian colonies must not leave Earth in the dust. A clarion call for global, rational, long-term thinking.



King of the Dinosaur Hunters

Lowell Dingus PEGASUS (2018)

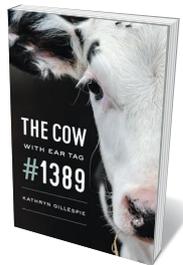
By his death in 1904, US palaeontologist John Bell Hatcher had unearthed a vast trove of fossils, including scientifically important *Triceratops* remains and 66-million-year-old mammal teeth. His finds went on to seed prestigious US collections such as that in the Carnegie Museum of Natural History in Pittsburgh, Pennsylvania. Palaeontologist Lowell Dingus exhaustively tracks Hatcher’s short but storied life, from early work for luminaries such as Othniel Charles Marsh to the astounding digs in fossil hotspots from Kansas to Patagonia that studded Hatcher’s starry scientific trajectory.



Europe: A Natural History

Tim Flannery ALLEN LANE (2018)

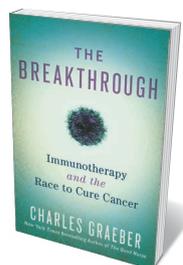
Some 100 million years ago, Europe was a tropical archipelago and, as a bridge between Africa, Asia and North America, a migratory hotspot. It became a protean, fecund region for hybridization. Palaeontologist Tim Flannery’s natural history takes us from the dinosaurs’ demise 66 million years ago to today. We meet the four-tusked elephant-like gomphothere, the nimravid (a sabre-toothed cat), and the hominin *Graecopithecus* (by way of footprints left on what is now Crete, 5.7 million years ago). The litany of extinctions ends in de-extinction projects such as the ‘mammophant’. A rich, illuminating journey.



The Cow with Ear Tag #1389

Kathryn Gillespie UNIVERSITY OF CHICAGO PRESS (2018)

What price a glass of milk? In this trenchant examination of the dairy industry, animal-studies researcher Kathryn Gillespie investigates its workings, wastefulness (farmers in the US Midwest and Northeast dumped 300 million litres of milk in early 2017) and impacts on the environment, such as leaks from manure lagoons. Gillespie’s central focus, however, is the effect on the cows, bulls and calves involved, before their inevitable slaughter. Her careful field research in auction yards and slaughterhouses shows how commodification of animals too often leads to severe, and disturbing, health and welfare issues.



The Breakthrough: Immunotherapy and the Race to Cure Cancer

Charles Graeber TWELVE (2018)

In this deft, detailed study of cancer immunotherapy, journalist Charles Graeber traces the breakthroughs leading to cutting-edge treatments today. Interwoven with the advances and portraits of researchers and patients is a fascinating backstory of medics who, from the late nineteenth century onwards, saw a link between infection and spontaneous regression of cancers. From the once-discredited pioneer William Coley to immunologist and Nobel laureate James P. Allison, they form a brilliant, driven, admirably stubborn group that Graeber brings vividly to life. [Barbara Kiser](#)