

the world, including the American Philosophical Society and the Institute of France. It was thus able to build up a library of bound journals unrivalled in Cambridge, at very little cost. When, after financial mismanagement by an employee, the society had to sell its premises in 1866, the university provided space for the many volumes: it became the institution's de facto science library until formally absorbed into the university library system in the 1970s.

The society's forward-thinking ethos did not immediately extend to gender equality, although members could bring women to meetings as guests. Sedgwick tried and failed to have the mathematician and writer Mary Somerville admitted as a fellow in 1831 (R. Holmes *Nature* **514**, 432–433; 2014). The first woman to give a paper at the society was Alice Johnson, a graduate of Newnham College who spoke on the comparative anatomy of birds and dinosaurs in 1883. Newnham had been founded for female students in 1871, and had its own laboratory. Another graduate, Anna Bateson, also presented papers, although her brother, the geneticist William Bateson, often read them in her place. In 1929, the society finally admitted women as fellows — 16 years before the Royal Society, and 19 before the university awarded women full honours degrees.

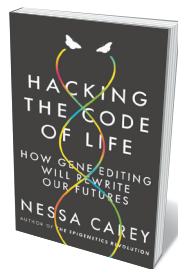
Gibson's argument for the society's influence is underpinned by her detailed study of its archives, catalogued in 2014. A wealth of correspondence, minute books, accounts and catalogues gives a unique, day-by-day insight into the growth of research as a professional occupation, and some of its less edifying byways. Influenced by the craze for anthropometry started by statistician and eugenicist Francis Galton, in 1886 the society set up a laboratory to measure the heads of undergraduates and others, in a misguided attempt to relate cranial size to intelligence. Cards bearing the original data remain in the archives: they were initially analysed by John Venn (of diagram fame) and later, more stringently, by the statistician Ronald Fisher.

More than once, Gibson describes the society as a “microcosm” of science at the time. The term is apt, but it is not the only instance of the author's tendency to repeat herself, as though mistrusting her readers' recall.

And what of the society itself? It continues to hold fortnightly meetings, now partly devoted to public engagement rather than new research, and it provides grants to early-career scientists. It has become, as Gibson writes, “just a small part of the vast landscape of Cambridge science — and that is the true mark of its success”. ■

Georgina Ferry's biography of Dorothy Crowfoot Hodgkin will be published in a new edition this year.
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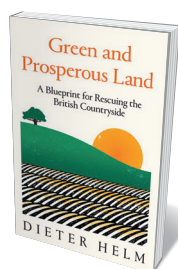
Books in brief



Hacking the Code of Life

Nessa Carey ICON (2019)

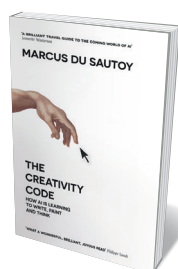
Phenomenal promise, implicit peril: CRISPR has come loaded with both from the start. Here, biotech veteran Nessa Carey explicates the gene-editing technique and its dizzying implications. She traces its evolution from 1970s pioneers of artificial gene transfer Stanley Cohen and Herbert Boyer, through the work of Francisco Mojica in the 1990s, to CRISPR dynamos Jennifer Doudna, Emmanuelle Charpentier and Feng Zhang. Carey's trawl of potential applications — such as high-yield rice varieties, therapies for sickle-cell disease and germline gene editing — is edifying. A focused snapshot of a brave new world.



Green and Prosperous Land

Dieter Helm WILLIAM COLLINS (2019)

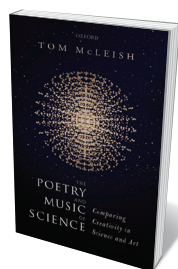
Pollution, degradation, loss: Britain's environment is in trouble after decades of bureaucratic wrangling and mismanagement. So argues economist Dieter Helm — chair of independent government advisory body the Natural Capital Committee — in this trenchant manifesto for change. Asking readers to imagine in granular detail the transformation of uplands and seashores, Helm lays out the means, from halting “perverse” farming subsidies and making polluters pay, to expanding wildlife corridors, marine protection and natural flood management. Visionary, pragmatic and context-rich.



The Creativity Code

Marcus du Sautoy FOURTH ESTATE (2019)

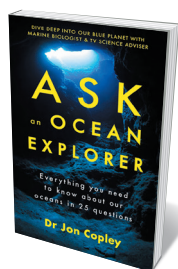
In this absorbing study, mathematician Marcus du Sautoy approaches the much-mulled question of whether artificial intelligence (AI) can supersede human creativity. He tours artworks such as the pixelated paintings of Gerhard Richter and an algorithmic portrait by French art collective Obvious; examines Google DeepMind's efforts to crack mathematical theorems; listens to AI “jazz improviser” The Continuator; checks out storytelling algorithm Scheherazade-IF; and more. Whatever one makes of du Sautoy's final verdict, the journey to it is eloquent and illuminating.



The Poetry and Music of Science

Tom McLeish OXFORD UNIVERSITY PRESS (2019)

Theoretical physicist Tom McLeish chases the echoes between scientific and artistic creativity in this intriguing scholarly treatise. Both, he argues, can be seen as imaginative exploration within constraints — whether the sonnet form or the known quantities of the Universe. He probes the wellspring of scientific innovation, looks at the visual imagination in painting and physics, and parses the nexus of maths and music. Unusually, he argues that early modern scientists and novelists both created experimental worlds — whether microcosms of the real, or fictional realms of the possible.



Ask an Ocean Explorer

Jon Copley HODDER AND STOUGHTON (2019)

Deep-ocean exploration demands frontier spirit. Marine researcher Jonathan Copley certainly has it: for more than 20 years, he has worked around Antarctica's underwater mountains, hydrothermal vents in four oceans, and beyond. In this engaging primer, he outlines basics such as how oceans are mapped (with multibeam sonar systems and satellite data) and which sites are weirdest (a Gulf of Mexico brine pool is a front-runner). And throughout, he deftly conjures the wonders of a bathynaut's world — barrel-sized sponges, krill poo, benthic siphonophores and all. **Barbara Kiser**