



Pieces Of Light
The New Science Of Memory

Charles Fernyhough
 Profile £14.99

CHARLES FERNYHOUGH IS a man in love with memory – his own memories, his young daughter’s, his elderly grandmother’s – so making a career as a psychologist who studies memory must have been a no-brainer. *Pieces Of Light* is an almost obsessive trawl through the author’s own memory bank that also explores some of the strange quirks of memory we all share.

We know the brain is required for learning, retaining and accessing memory, and research has revealed some of the cellular processes that encode new memories. But the mechanisms that enable us to recall things – from a fourth birthday party to the day of the week – remain elusive. This ‘autobiographical memory’ provides the narrative of our lives, so losing it through brain damage can be a devastating assault on our personhood.

With elegance and clinical sympathy, Fernyhough tells the stories of patients with various forms of brain damage that result in amnesia. Memory may remain an enigma, but this book is a good, accessible read for anyone interested in their own recollections.



PROF STEVEN ROSE is a neurobiologist and co-author of *Genes, Cells And Brains*

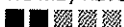


The Stardust Revolution
The New Story Of Our Origin In The Stars

Jacob Berkowitz
 Prometheus £23.95

AN AMBITIOUS ATTEMPT to tackle the emerging story of life’s origins on Earth in a cosmic context, this book takes in everything from molecular astrophysics to the discovery of new planets in a clear and breezy style. Science writer Jacob Berkowitz is keen to establish ‘the Stardust revolution’ – his own term – as being as significant as the Copernican and Darwinian revolutions, so page after page emphasises just how significant everything is. It not only grates, it’s also misleading: modern astrochemistry tells us more about star formation than planets, and meteoritics is more about planet formation than life. Berkowitz, however, is obsessed with the origins of life to the exclusion of all else.

Well informed, the book contains few factual errors (although Margaret Burbidge wasn’t the first female Astronomer Royal – she was scandalously passed over) but it often fails to identify the real story behind its anecdotes. *The Stardust Revolution* serves best as a pointer to exciting, overlooked research – it just doesn’t put that work in its proper context. For that, we may have to wait for a real revolution.



DR CHRIS LINTOTT is an astrophysicist and co-presents *The Sky at Night* on BBC TV



This Is Improbable

Cheese String Theory, Magnetic Chickens, And Other WTF Research

Marc Abrahams
 Oneworld £10.99

IF YOU’VE EVER wondered what occupies the minds of scientists who aren’t looking for that infernal Higgs boson, Marc Abrahams has some examples – at least when it comes to the more off-piste areas of research.

This book is an expansive collection of published papers compiled by Abrahams’s Improbable Research organisation, which aims to draw attention to science that will ‘first make people laugh, and then make them think’. The organisation is best known for awarding the annual Ig Nobel Prize, which is a little like a regular Nobel Prize, but less earnest. Last year’s winners included animal psychologist Dr Anna Wilkinson for her research paper ‘No Evidence Of Contagious Yawning In The Red-Footed Tortoise *Geochelone carbonaria*’.

This is Improbable is jam-packed with such examples. Some are funnier than others, but all are fabulously left-field. It’s a great reminder that science knows no boundaries, and that the scientific peer-review process doesn’t necessarily destroy good humour.



DALLAS CAMPBELL is a presenter of *Bang Goes The Theory* on BBC TV



Discord
The Story Of Noise

Mike Goldsmith
 OUP £16.99

GIVEN OUR VIEW of noise as a ‘pollution’, it might seem strange to write about what physicist GWC Kaye called ‘sound out of place’. National Physical Laboratory acoustics expert Mike Goldsmith, however, provides a fascinating new view.

Goldsmith’s writing brings the sounds of past ages vividly to life. Hunter-gatherers avoided camping near running water – which would have masked the sound of approaching enemies and predators – and the inner surfaces of Stonehenge were made smooth and concave to reflect chants. The science of acoustics runs in parallel to this history,

and here Goldsmith’s expert knowledge comes to the fore. He busts the wiki-myth that the decibel was named after Alexander Graham Bell (the real origin is geekily esoteric), but in maintaining that an unaided human voice cannot shatter a wineglass, he reveals a deaf spot for the *Mythbusters*’ successful demonstration.

Presenting medical, military and even cosmological applications, Goldsmith’s insight makes for an enjoyable read.



DR MARK LEWNEY is a ‘guitar physicist’ and a former winner of FameLab