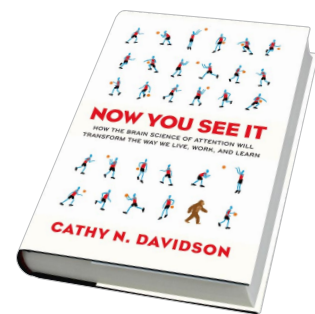


Now You See It

A familiar argument that lacks supporting evidence. Nothing new to see here, says Dan Willingham



How the Brain Science Of Attention Will Transform The Way We Live, Work, And Learn
Cathy N Davidson
Viking, £17.50
(352pp, hbk)

If you want to know how the web is influencing society, there are plenty of authors ready to tell you. Most fall into one of two camps: those who see it quickening the decline of intellectual standards, and those who see it heralding a golden future.

Davidson is one of the latter. Her analysis will be familiar to anyone who has sampled this genre. Our educational systems and workplaces are outdated. They prize expertise, specialisation and hierarchy but today's world, utterly changed by the net, prizes distributed knowledge, customisation and user-generated content. These changes, she argues, ought to revolutionise

the way we educate children and conduct business. For example, students should collaborate on meaningful projects rather than spend time listening to a teacher talk. Davidson argues that such changes are consistent with what's known about the brain, and that the main obstacle to their adoption is our blindness to new ways of thinking about familiar problems.

Davidson is a lively writer and her book a pleasurable read. But the argument she builds doesn't survive even mild probing. It's not at all obvious that "recent advances in brain science" support her views as she claims. And teachers don't follow traditional classroom practices from blind adherence to tradition. Actually,

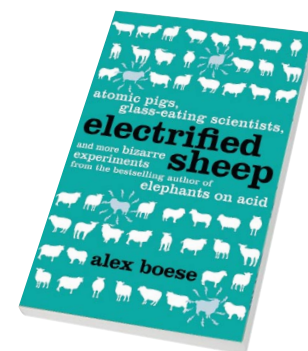
teachers say collaborative projects are a good idea.

Research on the use of interactive whiteboards in British classrooms is instructive on this point. It shows that for technological innovation to succeed, those using the technology must be given detailed training in how to use it, as well as concrete ideas on how best to exploit it to teach. And that's why *Now You See It* disappoints. The vision isn't dissimilar to that offered by many other internet enthusiasts but the details necessary to make the dream a reality are missing. ●●○○○

Professor Dan Willingham is a cognitive scientist



Collaborative projects that mimic the way the web works could make the classroom a better place to learn



Electrified Sheep
Alex Boese
Boxtree, £11.99
(256pp, pbk)

In 1884, businessman Richard Garner decided to become the first human to "master the simian tongue". He spent the rest of his life trying to understand how monkeys communicate. He started by studying them in zoos before setting out on a doomed expedition to Africa to study them in the wild.

The story of his hopelessly inept attempts to become the Monkey King are well told in Alex Boese's new book, *Electrified Sheep*. Like his earlier work, *Elephants On Acid*, it's a collection of some of the most bizarre and surprising experiments carried out in the name of science over the last four centuries. The stories range from electrifying birds, through plans to nuke the moon, to a terrifying group of self-experimenters.

Boese, who holds a master's degree in the history of science, clearly enjoys the collection of mavericks and misfits that he has assembled. As he explains in his foreword, he selects stories for his books on the basis that they aren't just weird but also show a "darker, more emotional side" to science.

The large number of bizarre stories you'll encounter in this book are both its strength and its weakness. The sheer range makes for an entertaining read but it's sometimes frustrating that there's not more detail. Boese does, however, provide extensive references for those who want to delve deeper. ●●●○○

Dr Michael Mosley is a BBC TV presenter and Focus columnist

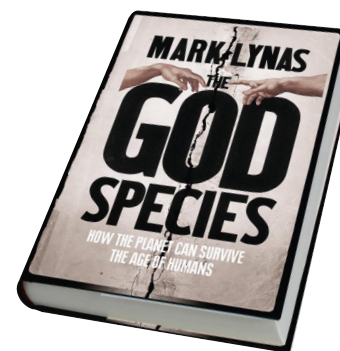
The God Species
How The Planet Can Survive The Age Of Humans
Mark Lynas
Fourth Estate, £14.99
(288pp, hbk)

The core of Lynas's book is 'We're in charge, so we'd better not stuff it up'. It examines threats to our environment and suggests ways we can escape them. Lynas thinks we should acknowledge mankind's scientific potency, and use our brains and markets to get us back on track.

The argument hangs on the nine 'planetary boundaries'. These are lines we supposedly shouldn't cross on key measures of global health: biodiversity loss, climate change, nitrogen cycle, land use, water use, pollution, aerosols, ocean acidification and ozone depletion. We're approaching, or over, the line on most, yet Lynas never reaches for the traditional remedies of less economic growth or fewer people. His fix is technological. Lynas used to be a more stereotypical 'greenie', and some criticisms of his former colleagues sting (he says environmentalists abuse the science on GM crops and nuclear power, just as climate change deniers do with atmospheric research).

This is a lively, timely, and occasionally revelatory work. Yet sometimes the optimistic note seems a little unfounded. It's well known that gloom doesn't sell and I get the feeling that he's been persuaded to tack on a happy ending. I hope I'm wrong. ●●●●●

Tom Heap is a broadcaster and Focus columnist



Expert Bookshelf

Chemistry

Chosen by
Peter Atkins

Nature's Building Blocks: An A-Z Guide To The Elements
John Emsley (2001)
OUP, £12.99

John Emsley takes you on a tour of nature's fundamental substances. One of chemistry's great achievements is showing that everything material in the world is constructed from 100 or so elements, and each of those elements has a chemical personality. Everyone should be aware of the elements, just as everyone should be aware of the letters of the alphabet.

Meaningful Scents Around The World
Roman Kaiser
(2006)
Wiley-VCH, £95

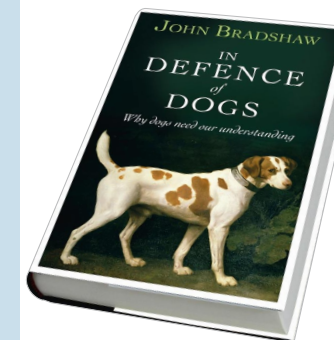
Chemistry books for the general public should show the pleasure of looking at everyday things with a deeper knowledge. Scent is a very important sense and it's wonderful to relate the scents of all the familiar things around us – flowers, spices, meat – to a number of quite simple molecules. Whereas some books open your eyes, this book opens your nose. It's an expensive book but ideal for your coffee table.

Molecules That Changed The World
KC Nicolaou & Tamsyn Montagnon (2008)
Wiley-VCH, £29.95

One of chemistry's great contributions has been the provision of medicines and substances that perhaps don't exist anywhere else in the Universe. Chemists have discovered how to craft complex molecules from the simplest components. This book shows not only how they do it but also the extraordinary impact of their creations on humanity.

Prof Peter Atkins is the author of Reactions: The Secret Life Of Atoms

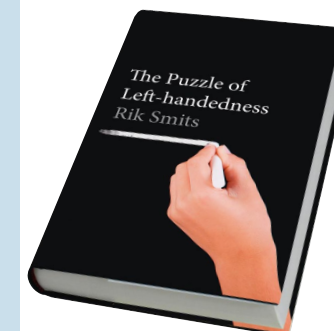
In Defence Of Dogs
Why Dogs Need Our Understanding
John Bradshaw
Allen Lane, £20
(352pp, hbk)



Both dog and wolf are descended from a common ancestor that lived about 15,000 years ago when domestication began. Since then, dogs have been bred for ever-better socialisation with humans, while the wolves that have survived are those least trustful of us. Despite this, many scientists still use the modern wolf as a template for understanding dogs. Renowned biologist and dog owner John Bradshaw shows dogs in a new light that is both an interesting armchair read and an important primer for any dog owner. ●●●○○

Luis Villazon is a zoologist and Focus Q&A expert

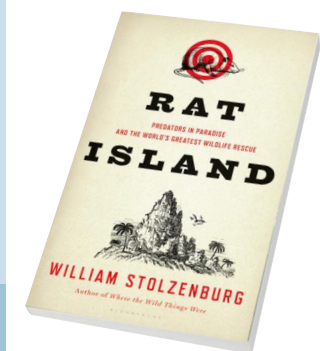
The Puzzle Of Left-handedness
Rik Smits
Reaktion, £20
(384pp, hbk)



Being intended as a popular book can't excuse the errors in *The Puzzle Of Left-handedness*. Why some people are left-handed raises interesting questions but this book doesn't answer them convincingly. To the usual mix of myths and half-truths about handedness are added suggestions of "malice and misunderstanding" on the part of most handedness researchers. Perhaps Smits's most bizarre claim is that all left-handers were once twins, the co-twin dying in the womb in 99 per cent of cases. For that, there is no evidence. ●●○○○

Prof Chris McManus is author of Right Hand, Left Hand

Rat Island
Predators In Paradise And The World's Greatest Wildlife Rescue
William Stolzenburg
Bloomsbury, £12.99
(288pp, pbk)



Ever since the Polynesians began exploring the Pacific 3,000 years ago, humans have left a trail of ecological destruction on the islands there. The bad guys are cats, weasels, goats, rabbits and (worst of all) rats – a motley crew of mainland mammals that have travelled with us, with terrible consequences for defenceless island wildlife. Stolzenburg takes us on a fascinating tour of far-flung locations, introducing a colourful cast of passionate conservationists fighting last-ditch battles to exterminate the 'alien invaders'. ●●●○○

Ben Hoare is features editor of BBC Wildlife magazine