

## BOOKS &amp; ARTS

## Top of the pops

What's special about the best popular science books?

**Jon Turney**

"There is no serious or stringent idea available of what makes a book a worthy example of popularization," grumbled the British literary critic Martin Green when he tried to make sense of the science books he found in the early 1960s. Forty years later, it is still true.

The problem is even more conspicuous now, because the intervening decades have seen such an outpouring of science writing. The science publishing boom of the 1980s and 1990s was marked by blockbuster titles such as Stephen Hawking's *A Brief History of Time* (Bantam, 1988), Stephen Pinker's *The Language Instinct* (William Morrow, 1994) and Jared Diamond's *Guns, Germs and Steel* (W. W. Norton, 1997). But hundreds of less celebrated titles remain in print. And although publishers' enthusiasm has faded a little, plenty of new titles continue to appear.

As a result, the prospective reader is faced with a bewildering choice of topics, authors and treatments. We may well be in a golden age of science writing, but without some critical aids to navigation, the really good stuff may not find the readers it deserves. If some of the millions who enjoyed Bill Bryson's huge bestseller *A Brief History of Nearly Everything* (Doubleday, 2003) look for another science title, how should they choose?

Guidance is hard to find. Lists of 'best science books' typically put historic landmarks such as Newton's *Principia* or Darwin's *On the Origin of Species* alongside contemporary efforts, which is hardly helpful as they are quite different from present-day popular science books in style, audience and intent. Individual new titles tend to be reviewed in the press by enthusiasts, rather than critics. Science journalists share with fashion writers a tendency to be cheerleaders for their subject, and science book reviewers often betray an assumption that any half-way competent science popularization is a Good Thing.

So are there any qualities to look for beyond the conventional attributes of good books, such as literary style or good story-telling? Books

are complicated things, so there is no single answer. But consideration of those widely thought to be the best science writers — Jared Diamond, say, or Richard Dawkins — prompts two suggestions for what is distinctive about the best current popular science.

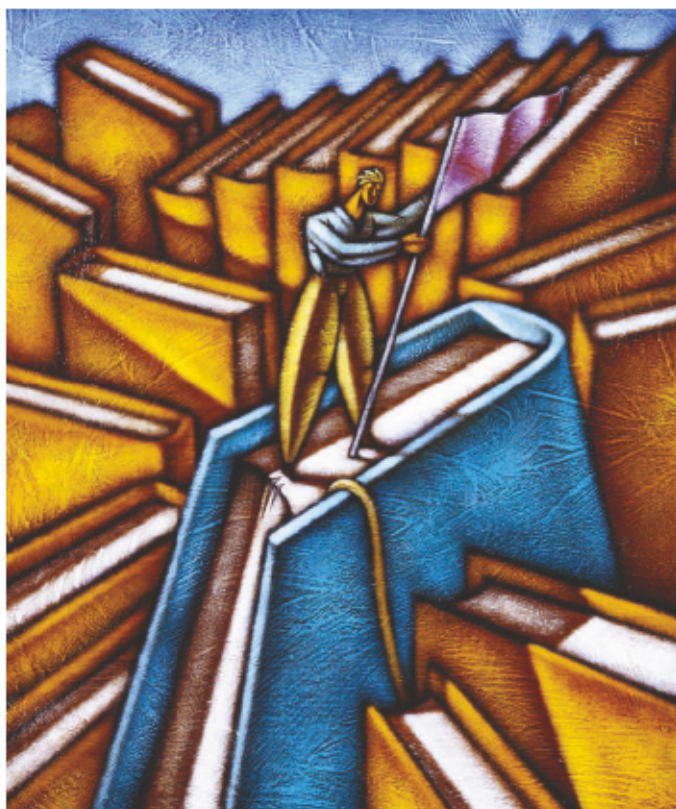
Science books often allow the authors to range beyond their own discipline. In some

range of ideas and data. But the general run of popular science books can be compared with the best on another key feature. What makes the recent boom in science writing important is that so many authors have got so good at constructing explanations. This is, of course, central to science anyway, but there is an art to recreating them on the page in intelligible form. Richard Dawkins in *Climbing Mount Improbable* (Penguin, 1996), Matt Ridley in *The Origins of Virtue* (Viking, 1996) and Brian Greene in *The Elegant Universe* (W. W. Norton, 1999) reinvent science in text of exemplary logic, clarity and accessibility. They take great pains to introduce the entities — be they genes or superstrings — that will bear the burden of the explanation, describing exactly what they can do, or what their properties and capacities are, and then showing how putting this into action produces the phenomena for which they are supposed to account.

Books still lend themselves to this better than any other medium. Building up these explanations in words often takes scores, even hundreds, of pages. The author needs great control over the different elements, and must carefully signal to the reader where they have been and where they are going. You can see all this in action in the extended exposition of the properties of genes in Dawkins' *The Blind Watchmaker* (Longman, 1986), for example, or of the elementary constituents of everything in Greene's account of string theory in *The Elegant Universe*.

Describing this kind of writing as defining the entities that underlie phenomena makes it sound rather like science. But from another point of view, the key entities in the popular science exposition become characters in an explanatory narrative. So perhaps it does all come down to story-telling. But if so, it is story-telling of a very particular kind. And it is the writers who do it best whose books will endure to become part of the popular science canon, however that is eventually defined. ■

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hands, this creates an opportunity to forge a synthesis that offers a unique and genuine contribution to scholarship — albeit one that inevitably attracts as many brickbats as bouquets from academics more committed to their specialism. Diamond's *Guns, Germs and Steel* and his more recent *Collapse* (Viking/Allen Lane, 2005) occupy one pinnacle of this kind of writing. But there are other outstanding examples that offer multidisciplinary stimulation, such as Nick Lane's *Power, Sex, Suicide* (Oxford University Press, 2005) about the role of mitochondria in the history of life, or Stephen Mithen's *The Singing Neanderthals* (Weidenfeld & Nicolson, 2005), which speculates on the origins of music and language.

Few authors, perhaps, can command this