

Google Flu Trends is an excellent example) and nonlinear complex systems (such as finance, energy or pandemics) as gushers of uncertainty and contemporary spaces of innovation make for deep and fruitful reading.

Although she gives us chapter headings like those of a self-help book ('Craving for certainty', 'The odds for tomorrow'), Nowotny refuses to be prescriptive — at least in this volume. Rather, she presents us with many ideas and numerous angles to chew over. My personal favourite is her tracking of public attitudes to risk, from viewing it as both negative and positive to seeing it as an almost completely negative factor that must be reduced. Her ideas about positive risk and why it must be increased offer a refreshing perspective in this compliance-oriented world.

“Treating science as a ‘fact tract’ to be memorized produces a populace that believes science is about answers, rather than questions.”

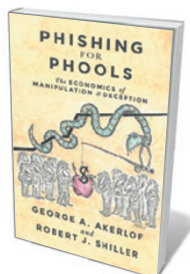
This is, above all, a book of ideas, not a policy manual, even though Nowotny would obviously like to see changes in funding, economic and management policies. She is well-equipped to lead us in this battle; throughout an illustrious academic career, she has served in numerous policymaking positions, for example in the European Science Foundation. And that is perhaps the one thing that I miss in this book: a more personal tour of uncertainty with a traveller who has come up against it in policy, funding, education and research. It is a shame that Nowotny does not occasionally put down the careful scholarly pen and take up the memoirist's.

As a scientist, I am at home with uncertainty. I like that the gathering of knowledge inevitably reveals new and unexpected bits of a vast unknown akin to the dark matter of epistemology. The real cunning of uncertainty lies in how it increases through every attempt to reduce it.

As for certainty, wherever you find it, you can be sure that a demagogue or dictator is nearby. French author and Nobel laureate André Gide advised that we should believe those who seek the truth — and doubt those who claim to have found it. This is one prescription that Nowotny courageously follows. ■

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Books in brief



Phishing for Phools: The Economics of Manipulation and Deception

George A. Akerlof and Robert J. Shiller PRINCETON UNIV. PRESS (2015)

In this acerbic dissection of free-market economics, Nobel-prizewinning economists George Akerlof and Robert Shiller trash the “invisible hand” theory, which claims that self-interest promotes social benefits. They reveal market economies as rife with trickery — “phishing” luring “phools” to make poor choices. The two pool their economic wisdom to analyse arenas from food buying and politics to the financial crisis that has plagued us since 2008. A needed call for sceptical economics and financial mindfulness.



On the Wing: Insects, Pterosaurs, Birds, Bats and the Evolution of Animal Flight

David E. Alexander OXFORD UNIV. PRESS (2015)

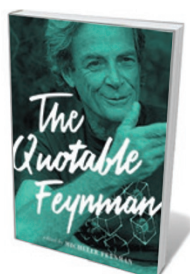
How do dragonflies, vultures or fruit bats fly? Biomechanics specialist David Alexander reveals all in this study of flight and the evolution of wings in pterodactyls, bats, birds and insects. Aloft with Alexander, we learn how pilots have observed phalanxes of swans flying at 8,000 metres, and how the gargantuan pterosaur *Quetzalcoatlus northropi* probably got off the ground. Alexander analyses aerial predation, sex, combat, sleep and even egg-laying; picks at the puzzle of bats' evolutionary relationships; and much more.



American Zoo: A Sociological Safari

David Grazian PRINCETON UNIV. PRESS (2015)

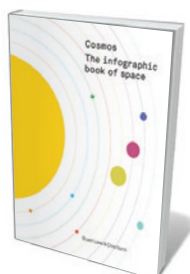
Cultural sociologist David Grazian once studied urban nightlife. Turning to another brand of contained wildness, he immersed himself in zoos. As a volunteer, he clipped a ferret's toenails, bathed tortoises and logged “more working hours of animal husbandry and faecal cleanup” than most professors can boast. His trek through 26 US zoos has yielded a powerful portrait of these conservation-hotspots-cum-living-labs — which end up telling us more about ourselves than about the animals. Peppered with delicious details, such as one zoo's use of the film *Austin Powers* for animal “enrichment”.



The Quotable Feynman

Edited by Michelle Feynman PRINCETON UNIV. PRESS (2015)

The Nobel-prizewinning, bongo-playing, exuberant and brilliant physicist Richard Feynman died in 1988. His contributions to science (including the theory of quantum electrodynamics) and science popularization ensure a lasting fame (R. Phillips *Nature* **504**, 30–31; 2013). His daughter Michelle has mined interviews, articles, books and lectures for this collection of quotes on everything from poetry to politics. Feynman's depth and zing leap from the page, as in: “What I am trying to do is bring birth to clarity, which is really a half-assedly thought-out pictorial semi vision thing.”



Cosmos: The Infographic Book of Space

Stuart Lowe and Chris North AURUM (2015)

Infographics remain on a roll, offering visual insight into abstruse regions of human knowledge. Astronomers Stuart Lowe and Chris North really lift off in this graphic exploration of all things space. Their depictions of year-by-year spaceflights and space junk shock through sheer numbers, while their takes on interplanetary missions, moons in the Solar System and particularly the polarization of the Milky Way — like a cosmic finger-painting in palest mauve — deliver the facts with aesthetic brio. [Barbara Kiser](#)