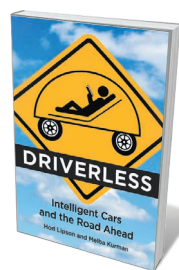




# SUMMER BOOKS

Head up to the heights of summer reading — picked by our regular reviewers — as labs and lecture halls empty.



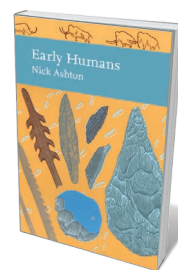
## Driverless: Intelligent Cars and the Road Ahead

HOD LIPSON & MELBA KURMAN  
MIT Press: 2016.

Cars are integral to daily life for many. Unfortunately, they are also integral to death for the 1.25 million people a year who, the World Health Organization notes, die from road injuries. Soon, however, tedious commutes and needless deaths could be a thing of the past, according to mechanical engineer Hod Lipson and technology writer Melba Kurman.

Lipson and Kurman are enthusiasts of the autonomous car, and their book follows the past, present and future of efforts to free automobiles from their human masters. From General Motors' Futurama exhibit at the 1939 New York World's Fair — featuring an automated highway — to current programmes at Uber and Google, the narrative interweaves a fascinating history of artificial intelligence with musings about what society will look like when driverless fleets arrive. Mostly, the authors argue, life will be better, because intelligent machines will ultimately be better drivers than humans. Yet there is the law of unintended consequences: driverless cars will eliminate jobs for lorry and taxi drivers, and even affect “morbid merchants” such as personal-injury lawyers, who rely on accidents for income. Whether better jobs will emerge to fill this void is unknown.

**Sharon Weinberger** is the author of *The Imagineers of War* and an executive editor at Foreign Policy.



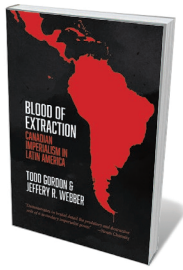
## Early Humans

NICK ASHTON  
William Collins: 2017.

Over the past million years, successive waves of species have colonized a remote peninsula on the northwest fringes of Europe, known to us as the British Isles. In this insightful study, British Museum curator Nick Ashton marshals the archaeological evidence for these events, which unfolded against a backdrop of extreme climatic fluctuation — inhospitable ice ages interspersed with balmy interglacial periods. The ice reshaped the landscape, changed the course of major rivers and led to the local extinction or retreat of plants and animals, including humans.

Against this turbulent backdrop, human occupation of Britain was intermittent and at times ephemeral. Nevertheless, up to three species of ancient human, as well as *Homo sapiens*, left traces. With the earliest of their fossils consisting of two teeth and a piece of long bone from half a million years ago, much of the evidence is indirect: stone tools, butchered animals and cannibalized human bone. Most remarkable is a cluster of footprints made about 900,000 years ago. Discovered on a Norfolk beach in 2013, they were recorded by Ashton and his team before being obliterated by storms. Further discoveries are anticipated as archaeological investigations move beyond the present-day shoreline to submerged ancient landscapes.

**Louise Humphrey** is a researcher in human origins at the Natural History Museum in London.



## Blood of Extraction: Canadian Imperialism in Latin America

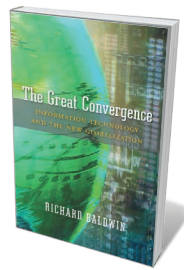
TODD GORDON &  
JEFFERY R. WEBBER  
*Fernwood: 2016.*

Despite its honed reputation as an ethical global actor, Canada has a dirty secret. It is the corporate home to two-thirds of the world's mining companies, part of a rapacious industry with an abominable environmental and human-rights record. Mining consumes vast quantities of water, contaminating watersheds and land with acids and heavy metals. Yet Canadian foreign policy champions the extractive industry, notably in Latin America, as this piercing indictment shows.

Indigenous communities and environmental activists across the region have resisted — even routing some projects — but face extreme brutality. Since 2009 alone, dozens of activists protesting against Canadian mining have been killed by police, paramilitary forces and private security firms, part of an ongoing slaughter (see [go.nature.com/2vtbjf7](http://go.nature.com/2vtbjf7)). The authors mined thousands of Access to Information pages, exposing how Canada has effectively abetted this nexus of violence and official collusion.

This eye-opening volume should pressure Canada to clean up its lax securities laws and imperialistic foreign policy — and push us all to rethink the unspeakable price of mineral extraction.

**Anne-Emanuelle Birn** is professor of critical development studies and global health at the University of Toronto in Canada.



## The Great Convergence: Information Technology and the New Globalization

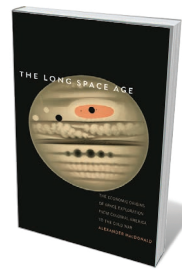
RICHARD BALDWIN  
*Belknap: 2016.*

The iron-hulled ocean-going steamships and submarine telegraph cables of the late nineteenth century set off the first wave of economic globalization. Intercontinental transport of commodities and people became extraordinarily cheap. In the late twentieth century, container ships made transport of items — perishable and non-perishable — essentially free, setting off the second wave.

In this deft treatise, economist Richard Baldwin argues that we are seeing a third wave. The Internet and intercontinental airliners allow transfer of engineering expertise for efficient manufacturing production. Thus, goods can now be produced in any location with secure property rights, a literate labour force and a cadre of technicians.

The first two waves of globalization were boons for all. The third, Baldwin argues, is working mainly to the advantage of intellectual-property owners in developed countries, and of emerging markets able to access productive global value chains. Developed-world communities and factory workers once had an edge in technical expertise to support high-productivity manufacturing, but have now lost it.

**Brad DeLong** is an economic historian at the University of California, Berkeley.



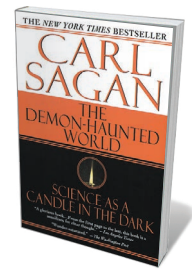
## The Long Space Age

ALEXANDER MACDONALD  
*Yale University Press: 2017.*

There are fascinating parallels between large-scale government-funded space exploration, which has become so common since NASA was founded in 1958, and the deep history of private-sector efforts before that. Economic historian Alexander MacDonald explores that nexus in *The Long Space Age*. As he shows, nineteenth-century astronomy found success through private benefactors, as did rocketry development before the Second World War. Early space-exploration efforts were expansive: 42 US observatories received substantial funding (96% of it from private donors) over the course of the nineteenth and twentieth centuries.

MacDonald accentuates the research of Robert Goddard, who developed the first working liquid-fuel rockets in the 1920s and was funded by the Smithsonian Institution, the Guggenheim Foundation and others. The author's neo-liberal perspective insists that overturning the emphasis on private-sector activities in the post-Sputnik era enabled great accomplishments — culminating in Apollo 11 and the lunar landing. It also, he contends, created an expectation about a certain type of large-scale space programme that has failed to make much progress since the early 1970s. MacDonald argues that today's space entrepreneurs, such as Elon Musk and Jeff Bezos, look set to guide the United States back to its glory days in space.

**Roger D. Launius** is principal of Launius Historical Services.



## The Demon-Haunted World: Science as a Candle in the Dark

CARL SAGAN  
*Random House: 1995.*

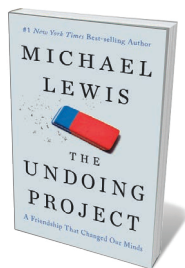
From 2011 to 2015, Donald Trump used Twitter to dismiss the threat of human-caused climate change as a “hoax” thought up by the Chinese government — in his words, “to make U.S. manufacturing non-competitive”. As president, he has appointed individuals with similar views to the highest echelons of government.

Carl Sagan prophesied this in 1995. In his study on the scientific method and sceptical thinking, *The Demon-Haunted World*, the astrophysicist imagined with foreboding a future United States in which “no one representing the public interest can even grasp the issues”. In tandem with that, he saw the emergence of a generation at risk of becoming unable to differentiate between “what feels good and what’s true”, exposed to media soundbites, predigested science — and even pseudo-science. He feared a descent into superstition and ignorance.

Sagan died a year after the book was published, but his words still offer wisdom and clarity at a time when science and reason are under threat. Now is the time to read, or reread, this prescient classic.

**Michael Mann** is distinguished professor of atmospheric science at Pennsylvania State University in University Park, in the Department of Geosciences and the Earth and Environmental Systems Institute. He is also director of the Penn State Earth System Science Center.





## The Undoing Project: A Friendship that Changed Our Minds

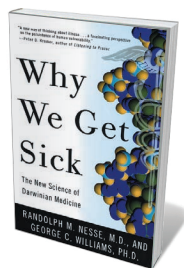
MICHAEL LEWIS  
W. W. Norton: 2016.

Some 40 years ago, Israeli psychologists Daniel Kahneman and Amos Tversky realized that the strongest element in decision-making is not logic or experience, but the stories people tell themselves. Their collaboration became one of the most intense and productive in science.

Kahneman and Tversky were an odd couple, as Michael Lewis paints them: the former moody, disorganized and insecure, the latter talkative, tidy and confident. This biography is fascinating as an explication of how behavioural economics arose, and as a fund of human stories. There are the personal tales of the duo — both were grandsons of rabbis, were atheists and served in the Israeli military — and accounts of their complex, ultimately fraught partnership.

Lewis tells how Kahneman and Tversky studied two kinds of story: those that people build to guide their judgements, and the mental scenarios through which they “undo” painful realities (hence the title). *The Undoing Project* masterfully meshes the gradual breakdown of a powerful relationship and the emergence of a field. Tversky said that “interesting things happened to people who could weave them into interesting stories”. Lewis must be fascinating.

**Robert P. Crease** is a philosopher at Stony Brook University, New York, and co-editor-in-chief of *Physics in Perspective*.



## Why We Get Sick: the New Science of Darwinian Medicine

RANDOLPH M. NESSE &  
GEORGE C. WILLIAMS  
*Times Books*: 1995.

Few books can claim to have introduced an entirely new discipline. *Why We Get Sick*, by evolutionary biologists Randolph Nesse and George Williams, is one. It presented evolutionary medicine as a framework for understanding disease and the human body's apparent frailties and design challenges (such as a narrow birth canal) that put us at risk.

Nesse and Williams argued that the mechanisms that we typically think of as causes of ill health — genetic variants that increase our risk of coronary heart disease, say — need to be complemented by functional evolutionary explanations. This perspective encourages us to think about why apparently deleterious forms of genes have persisted. Do they offer some other advantage (similar to the protection against malaria conferred by the genetic variants that cause sickle-cell disease)? Or have they persisted simply because the diseases they cause occur relatively late in life and were subject to little selection when lifespans were shorter? This is a book that reminded me that geneticist Theodosius Dobzhansky's statement “nothing in biology makes sense except in the light of evolution” applies equally to medicine.

**Marcus Munafo** is professor of biological psychology at the University of Bristol, UK.

