

Machiavellian leaders to gather support for their ambitions, as when the Nazis blamed the Jewish people for Germany's economic woes.

This is where science, technology and reason come into play, Shermer argues: the growth of global information and communications networks has rendered it increasingly difficult to perpetrate the falsehoods that let authoritarian leaders maintain their rule. For Shermer, an increasingly educated populace with access to information undermines parochialism and pseudoscience, by allowing people to judge for themselves. The role of smartphones and social media in fuelling the 2011 Arab Spring uprisings is a case in point.

This is a welcome turnaround from *The Believing Brain* (Times, 2011), in which Shermer argued the rather nihilistic position that “beliefs come first, explanations for beliefs follow”. In *The Moral Arc*, Shermer, founder of the Skeptics Society, adheres to Enlightenment thought. His subtitle, *How Science and Reason Lead Humanity Toward Truth, Justice, and Freedom*, evokes the call to arms of philosopher Immanuel Kant in his 1784 *What is Enlightenment?*: “Have the courage to use your own understanding.”

Some of Shermer's positions would have surprised Enlightenment writers. Kant, for instance, believed that the oppressive state and authoritarian church were the sole impediments to truth and justice. We know now that even people with access to the ballot box and free expression can embrace intolerant and obscurantist doctrines. Moreover, Voltaire and others believed that the uneducated could not apply reason to the affairs of life. Shermer, by contrast, is a vigorous proponent of political democracy and equal rights.

Shermer's is an exciting vision, but he is mistaken in thinking that truth, freedom and justice are the inevitable by-products of scientific advance. Modern liberal democracy is the product of masses of people collectively throwing off the yoke of authoritarian states. But the power of popular action was made possible by a military technology: the handgun. This displaced elite cavalry and required nations to give the vote to peasants and citizens, who became the lifeblood of military defence. Even today, the United States, with its formidable drones and missiles, cannot win a war without ‘troops on the ground’.

We must be on constant guard against new instruments of information control, persecution and death that could once again render secular and religious totalitarianism a viable social alternative. Constant vigilance by altruists such as Wilson and rationalists such as Shermer may in the end win the day. ■

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Books in brief



Most Wanted Particle: The Inside Story of the Hunt for the Higgs, the Heart of the Future of Physics

Jon Butterworth EXPERIMENT (2015)

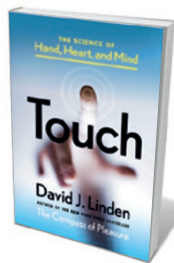
The Higgs boson may seem amply biographized, but Jon Butterworth's account of its 2012 discovery offers deep context. As a physicist on the ATLAS experiment at CERN — the Higgs hunting ground near Geneva, Switzerland — Butterworth is an insider's insider. His narrative seethes with insights on the project's science, technology and ‘tribes’, as well as his personal (and often amusing) journey as a frontier physicist. Glossaries on the standard model of physics, Feynman diagrams and more are included.



Sea of Storms: A History of Hurricanes in the Greater Caribbean from Columbus to Katrina

Stuart B. Schwartz PRINCETON UNIVERSITY PRESS (2015)

Ten years ago, Hurricane Katrina killed more than 1,800 people and submerged 80% of New Orleans, Louisiana. Historian Stuart Schwartz frames that catastrophe within five centuries of hurricanes in the greater Caribbean — natural disasters that mirrored and exacerbated the violent social upheavals that erupted as European nations pursued New World riches. Today, a mix of political vagaries and patchy official disaster response presents dangerous ambiguities in a region where more cyclones are a certainty.



Touch: The Science of Hand, Heart, and Mind

David J. Linden VIKING ADULT (2015)

A touching story? A tactless comment? So elemental is the sense of touch that it permeates metaphors we live by. In this succinct treatise, neuroscientist David Linden explores the “weird, complex, and often counter-intuitive” tactile system and its intimate impact on the human experience. Through scores of scientific studies and anecdotes, Linden investigates phenomena ranging from the two separate touch systems in the skin (one slow, one fast), to a detailed ‘cast list’ for the main neurophysiological players in orgasm, such as the somatosensory cortex, amygdala and cerebellar nuclei.



Melting Away: A Ten-Year Journey through Our Endangered Polar Regions

Camille Seaman PRINCETON ARCHITECTURAL PRESS (2014)

In the space of a generation, Antarctica and the Arctic have metamorphosed from remote frontiers to cruise destinations, their icy reaches and charismatic wildlife exhaustively mapped and filmed. But writer and photographer Camille Seaman (see J. Hoffman *Nature* **492**, 40; 2012) has a rare gift for making them seem arrestingly alien again. Her coffee-table book is the product of ten years at the poles; its images alone are a compelling argument for protecting the wonder and strangeness at the ends of the Earth.



Fantasy Islands: Chinese Dreams and Ecological Fears in an Age of Climate Crisis

Julie Sze UNIVERSITY OF CALIFORNIA PRESS (2015)

Carbon-neutral, zero-waste and home to 500,000 people: the Chinese eco-city of Dongtan seemed a radical urban dream. But the city, to be sited near Shanghai on Chongming — the world's biggest alluvial island — remains a blueprint. As Julie Sze argues in this thoughtful, if uneven, analysis of Chinese “eco-desire”, the culprit could be irreconcilable beliefs in harmony with nature, and the ability of autocratic political structures to enact radical change. **Barbara Kiser**