

writes, Russia and China define ‘information security’ in a way that mirrors their aim of legitimizing state control over information.

There are efforts through the United Nations and other forums to devise norms for conduct in cyberspace, which may either enhance or diminish national power over the Internet. For example, the US Defense Science Board asked in a report this year: “Is it acceptable or unacceptable for nations to pre-position malicious software in each other’s electrical grids, as appears to have occurred to the United States?” If it is acceptable, the board advised, the United States should do it too, if only as a deterrent. If it is not, the perpetrators should be identified and punished. Meanwhile, international diplomacy is there for resolving conflicts and, although an apparently weak reed, can sometimes be fruitful. A US–China agreement in September 2015 resulted, Klimburg notes, in “the most massive reversal in the history of cyber conflict”, with Chinese cyberattacks on US firms dropping sharply.

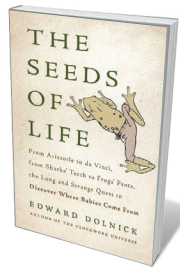
The Darkening Web is not a full account of current events. It barely touches on Russian intervention in the US presidential election. It does not mention the hacking group The Shadow Brokers, which acquired stolen intelligence tools from the US National Security Agency (NSA) in 2016; the global WannaCry ransomware episode in May this year; or the new Chinese cybersecurity law that vaguely aims to regulate “cross-border movement of data”. What it does provide is a thoughtful framework for assessing developments in this fast-moving area.

At its best, the book questions its own premises and reflects on them. Klimburg admits that those in the West rarely see opposing perspectives clearly. So if it is hard to understand Russia’s “overt level of aggression” on the Internet, that may be because other nations are ignorant of Russia’s own burden of cyberattacks. The West itself, he argues, has eroded the trust that is the foundation of the free Internet by engaging in indiscriminate surveillance activities, such as some of those enacted by the NSA and disclosed in 2013 by former contractor Edward Snowden.

Ultimately, Klimburg concludes, the battle for a free Internet “is nothing less than the struggle for the heart of modern democratic society”. It will be up to the democratically inclined to defend it as best they can. ■

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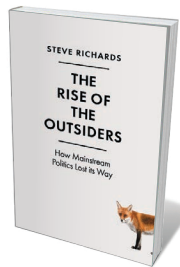
Books in brief



The Seeds of Life

Edward Dolnick BASIC (2017)

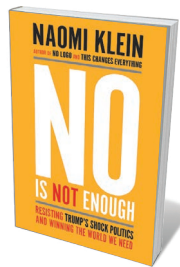
For millennia, reproduction was a black box to philosophers and physicians, who puzzled in vain over the dissected corpses of pregnant deer or the function of semen. Edward Dolnick’s absorbing detective story spans outlandish ancient theories on baby-making and the nineteenth-century dawn of embryology, led by pioneers such as Oscar Hertwig. Along the way are Leonardo da Vinci finding that blood, not ‘wind’, engorges the penis; Regnier de Graaf literally unravelling the functions of dormouse testicles; and Lazzaro Spallanzani fitting frogs with silk underwear to test the relation of sperm to egg.



The Rise of the Outsiders: How Mainstream Politics Lost its Way

Steve Richards ATLANTIC (2017)

A red-hot question in contemporary politics is how outsiders from Alexis Tsipras to Marine Le Pen ended up strutting the world stage. Political analyst Steve Richards asks a tough question in return: why did mainstream parties allow these “intimidatingly strong and yet transparently weak” candidates to gain a toehold? This is a smart, detailed insider’s study of how, after the 2008 financial meltdown, left and right lost vision, adaptability and public trust. In the resulting vacuum, populists’ big promises gained allure — until the realities of high office revealed the “powerlessness of power”.



No Is Not Enough

Naomi Klein HAYMARKET (2017)

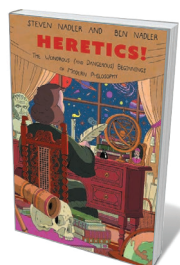
Journalist Naomi Klein is on electrifying form in this study of “shock politics” — how leaders capitalize on public disorientation after crises such as terrorist attacks, a variation on her findings in *The Shock Doctrine* (Random House, 2007). During a presidency more like a corporate merger between ‘super-brand’ and government, Donald Trump, Klein argues, governs through serial shocks — U-turns and edicts on everything from climate to immigration. Klein’s strategy for disaster preparedness is to focus on positives, such as calling for 100% renewables. A bold, compelling analysis.



Bugged

David MacNeal ST MARTIN'S (2017)

For every human, there are 1.4 billion insects. David MacNeal invites us to revel in that fact by roaming over this gargantuan family and the scientific subculture wrapped up in it. MacNeal is a witty, informed guide to a world of winged and scuttling wonders, where fleas can hit g forces many times those felt by a lunar rocket on re-entry, and tiger beetles make smoothies of their prey. We meet researchers using mosquitoes’ stinging probosces as model hypodermic needles, and vicariously savour chemically complex wild honey from hives on uninhabited Greek islands. Entomology at its most enchanting.



Heretics!

Steven Nadler and Ben Nadler PRINCETON UNIVERSITY PRESS (2017)

A graphic novel about the bumptious philosophers of the seventeenth century? What’s not to like? Philosopher Steven Nadler and illustrator Ben Nadler have crafted an absolute gem of a science history, capturing with gravitas and zing the abstruse musings of René Descartes on mind–body dualism, John Locke on empiricist epistemology, and more. Inevitably, the Church’s malign impact looms, notably over Galileo Galilei, Baruch Spinoza and heliocentrist Giordano Bruno, burned at the stake in 1600. **Barbara Kiser**