

such as the introduction during the Second World War of management science and operational research, which went beyond improving weaponry. “The actual use of those weapons and the organization of men using them were seen as scientific problems in themselves,” Coker writes of this change. He sees that application, however, as depriving soldiers of their humanity, arguing that the feedback loops lauded by Kennedy are “post-heroic”.

The chief concern outlined by Coker is that the ingenuity driving military science is spiralling out of control. The ‘geeks’ are creating technologies — designer drugs, robotics and neural devices — that, ultimately, he feels, will dehumanize us.

Coker drives home his points with much reference to philosophy and literature, segueing smoothly from trashy Hollywood films such as the forgettable *Stealth* (Rob Cohen, 2005) — rogue drones, anyone? — to the work of the Polish poet Zbigniew Herbert. Sometimes, the philosophizing goes over the top. For instance, Coker sees efforts to develop pharmaceutical interventions to treat post-traumatic stress disorder (PTSD) as scientists wanting to eliminate guilt through drugs. People affected by severe PTSD might argue that such research is in fact about treating symptoms so debilitating that sufferers are often left without jobs or family.

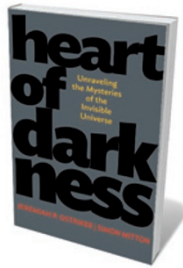
There is much to be said about the dangers of technologically driven warfare, such as the use of armed drones for targeted killings. But the senseless slaughter, in 1994, of more than 500,000 people in Rwanda was carried out in large part by men with machetes. Coker might argue that this form of genocidal warfare was never imbued with Greek values in the first place. But the sheer brutality of that war leaves me doubting that killing someone with the crudest of weapons is any more human, or heroic, than killing by gun-toting robots.

The power of both these books lies in how they prompt us to look through the authors’ prisms at the now more than 10-year-old war in Afghanistan. Would empowering Kennedy’s problem solvers allow the United States to prevail? Probably not: the building of a modern nation defies managerial or technical solutions.

On the bright side, I remain unconvinced that Coker’s geeks are going to strip us of our humanity. If that happens, we should blame neither the scientists nor the middlemen, but the politicians who take us into misguided wars in the first place. ■

Sharon Weinberger is a freelance reporter in Washington DC. She is currently working on a book about the Defense Advanced Research Projects Agency.
e-mail: sharonweinberger@gmail.com

Books in brief



Heart of Darkness: Unraveling the Mysteries of the Invisible Universe

Jeremiah P. Ostriker and Simon Mitton PRINCETON UNIVERSITY PRESS 288 pp. \$27.95 (2013)

In this sweeping chronicle of cosmology, astrophysicist Jeremiah Ostriker and science historian Simon Mitton seamlessly blend historical narrative with lucid scientific explication, from the depths of classical time to the data-fuelled hyperdrive of the past 50 years. The authors shine what light there is on dark matter and dark energy — a combination Ostriker has helped to pioneer in his models — but admit that the picture is incomplete and plenty of discovery awaits.



Heat: Adventures in the World's Fiery Places

Bill Streever LITTLE, BROWN 368 pp. \$26.99 (2013)

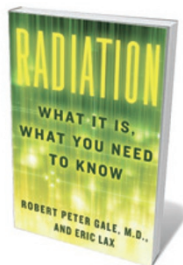
Biologist Bill Streever might be forgiven for switching from *Cold*, his debut best-seller, to *Heat*: he lives in Alaska. This intense, pacy ride through the thermal kicks off with thirst and ends with quarks freed by heat at the Relativistic Heavy Ion Collider at Brookhaven National Laboratory in Upton, New York. In between, Streever treats us to California wildfires and the chaparral they feed on, John Tyndall’s discovery of greenhouse gases, the culinary chemistry of Hervé This, arson, Hawaiian lava fields, atomic bombs, charcoal-burning and even fire-walking. Simmering with verve throughout.



The King of Infinite Space: Euclid and His Elements

David Berlinski BASIC BOOKS 192 pp. \$24 (2013)

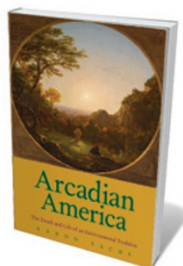
Fifty years might be a triumphant span for today’s textbooks. Euclid’s *Elements* is still fresh after 2,300. As mathematician David Berlinski writes in this pared and elegant homage to the peerless geometer and his magnum opus, the influence of Euclid’s axiomatic system remains vast. Berlinski unpacks the axioms, propositions and proofs along with their passage through history — from their influence on Copernicus and Bertrand Russell (who called his encounter with *Elements* “as dazzling as first love”) to the non-Euclidean world that sprang open in the nineteenth century.



Radiation: What It Is, What You Need to Know

Robert Peter Gale and Eric Lax KNOPF 288 pp. \$26.95 (2013)

Medical veteran of hot zones from Chernobyl to Fukushima, Robert Peter Gale — haematologist, oncologist and expert in bone-marrow transplants — delivers a guide for those perplexed by radiation. With science writer Eric Lax, Gale weighs up the risks and benefits of industrial, medical and natural radiation clearly, logically and with ample science. But it is Gale’s phenomenal frontline experience that gives this book edge — not least a bizarre incident in Goiânia, Brazil, where caesium-137 scavenged from an abandoned radiation-therapy machine eventually affected more than 100,000 locals.



Arcadian America: The Death and Life of an Environmental Tradition

Aaron Sachs YALE UNIVERSITY PRESS 496 pp. \$35 (2013)

From Yosemite to Yellowstone, the US national parks remain a historical touchstone for national environmentalism — but not the only one, argues Aaron Sachs. In a rich mix of history, cultural critique and memoir, Sachs reveals the cemetery as a half-forgotten nineteenth-century landscape tradition. These micro-Arcadias inspired close observation of nature in increasingly urbanized spaces, as well as contemplation of mortality and the sublime.