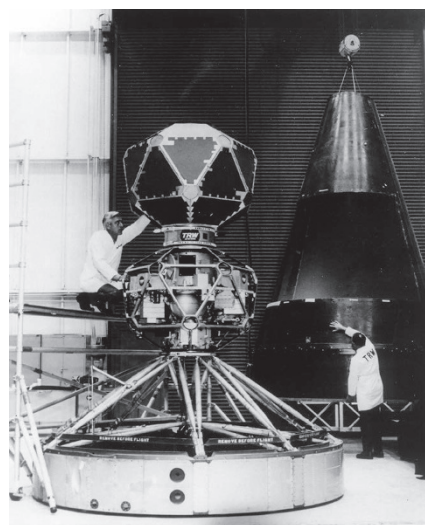


Descendants of the project include armed drones, remote-sensor technologies, networked battlefield simulations and the Orwellian-sounding Total Information Awareness programme. This was launched by DARPA soon after the World Trade Center attacks in New York on 11 September 2001. The programme sought to combine traditional surveillance with data mining on huge volumes of citizens' private information — another controversial project that, like AGILE, survived under different names long after critics had supposedly shut it down.

Weinberger charts a narrowing of focus — and, perhaps, influence — for DARPA. Technical fixes in recent years include a universal translator based on computational linguistics, developed to help soldiers communicate with locals in Iraq and Afghanistan; this ultimately proved useless. And a glitzy effort to develop driverless cars, even before major tech companies got in on the act, seems emblematic of “Disneyfication”: the pursuit of expensive gadgets with limited potential to meet pressing national-security challenges.

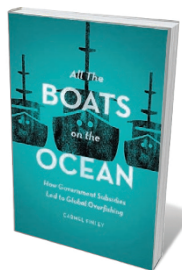


ARPA's Vela Nuclear Detection Satellite in 1967.

Since its founding, DARPA has cultivated scientific and technical capability in the US federal government. Its projects have not always succeeded; indeed, as Weinberger documents so well, some of its spectacular failures reveal the true reach of its leaders' ambitions. The biggest uncertainty now is what role scientific and technical expertise might have in an era of ‘alternative facts’. With basic elements of reality now routinely dismissed as partisan talking points, DARPA may well face its greatest challenge. ■

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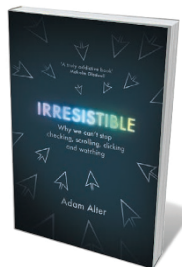
Books in brief



All the Boats on the Ocean

Carmel Finley UNIVERSITY OF CHICAGO PRESS (2017)

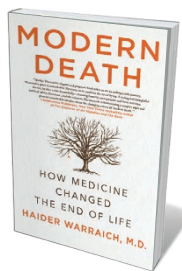
As the Food and Agriculture Organization of the United Nations reports, 90% of global fish stocks are fully fished or overfished. Science historian Carmel Finley traces that crisis back to the cold war, when the United States, Japan, the Soviet Union and other seafaring nations deployed fishing to stake territorial claims. From the 1970s on, trawling and government subsidies forced an explosion in the industry. Now, with little reduction in subsidized fleets and oceans at risk, Finley sees the future of fisheries hinging on holistic approaches involving fish, fisher and environment.



Irresistible

Adam Alter BODLEY HEAD (2017)

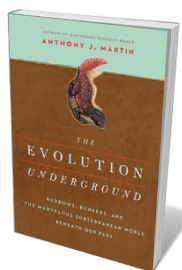
From Facebook to Fitbit, the digital infiltrates life: many people now spend 100 hours a month on their mobile phones. In this superb study of Internet addiction, Adam Alter anatomizes the cynicism of an industry in which compulsive lures are built into products that billionaire bosses avoid like the plague. Drawing on a trove of neuroscience, he isolates six “ingredients” of behavioural addiction, such as unresolved tension. Commendably, he also offers pragmatic preventive solutions for children and techniques for addicted adults, such as stripping numerical feedback from social-media platforms.



Modern Death: How Medicine Changed the End of Life

Haider Warraich ST MARTIN'S (2017)

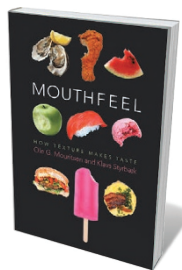
Daily exposure to death and the agonies of the bereaved prompted cardiologist Haider Warraich to encapsulate the recent transformation in end-of-life care. The result is rich, splicing harrowing cases from the acute admissions ward into medical history and science as he examines everything from the death of a cell to the impact of death on society. Warraich details resuscitation technologies that are redefining death; delves into the debate over dying at home; explores euthanasia and terminal sedation; and advocates greater openness about all this on the part of physicians.



The Evolution Underground

Anthony J. Martin PEGASUS (2017)

As refuges from cataclysm, nurseries or traps for prey, animal burrows have been central to evolutionary history, and have altered ecosystems and planetary chemistry. Palaeontologist Anthony Martin is an amiably erudite guide to burrowing fauna, from the giant sloth *Glossotherium*, which thrived in the Pleistocene epoch, to earthworms, naked mole rats — and star tunnellers such as the gopher tortoise (*Gopherus polyphemus*) and the Patagonian conure (*Cyanoliseus patagonus*), a parrot that nibbles nesting holes in cliffs. Down the rabbit hole with Martin, Earth becomes one vast, “constantly evolving burrow system”.



Mouthfeel: How Texture Makes Taste

Ole G. Mouritsen and Klavs Styrbæk, transl. Mariela Johansen COLUMBIA UNIVERSITY PRESS (2017)

The ‘mouthfeel’ of foods — the jawbone-jarring crunch of a crouton or the voluptuous viscosity of melting chocolate — is a key element of taste. Biophysicist Ole Mouritsen and chef Klavs Styrbæk nimbly explore the interplay of food textures and the mouth's somatosensory system. Inspired recipes (fried cod swim bladder, for instance) mesh with science on milk's “surprisingly complicated inner structure” and the 40,000 varieties of rice. [Barbara Kiser](#)