

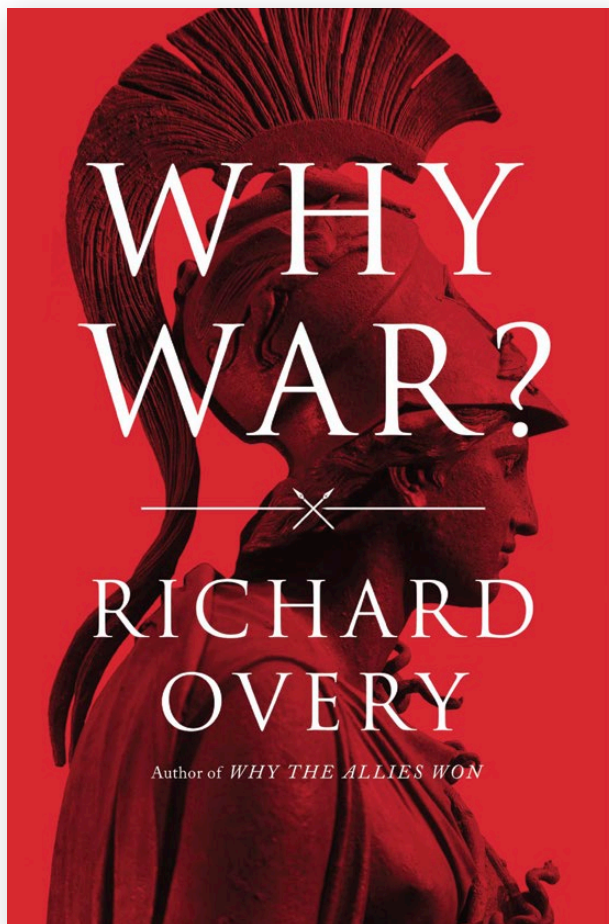
BOOKS

War Is Us

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Richard Overy is a preeminent historian of war, especially the Second World War. He is perhaps best known for *Why the Allies Won*, which seems to me the finest account of its kind, and certainly the most accessible. Like many others on World War II, that book pointed to the production accomplishments of the United States as the “Arsenal of Democracy.” Along with millions of manufacturing workers, engineers and scientists were vital for those accomplishments, just as they were for the design and development of weaponry, including proximity fuzes, atomic bombs, and the B-29s that dropped them on Hiroshima and Nagasaki.

Scientists were primarily responsible for the underlying analytical models and technical calculations that led to two quite different designs for the first fission weapons. But it was engineers and other workers, including industrial managers, who figured out how to produce fissionable materials (enriched uranium and plutonium) in the quantities needed. These were enormously demanding tasks, and experience in heavy industries such as chemicals provided the basis for carrying them through. Then, too, engineers and other technologists designed, developed, and tested the B-29 Superfortress in its several iterations—an aircraft that, as a technical system, was far more complex than any flown before it.



Why War?

by Richard Overy. New York, NY: W. W. Norton & Company, 2024, 304 pp.

Including expenditures during the production run, the bombers ended up costing half again as much as the entire Manhattan Project.

Now Overy has written *Why War?*, which is a considerable departure from his previous work in that its history is that of the wide variety of explanations put forth over the years for why humans (mostly men, but sometimes joined by women) have fought and killed one another in groups, that is through organized violence.

Overy focuses chiefly on accounts offered from the early part

of the twentieth century, most of them by natural and social scientists of one tribe or another, along with other historians. Archeologists, in particular, have traced armed conflict far back into prehistory, when small bands fought for reasons now impossible to determine, the only remaining evidence being fragments of weapons and damage done to skulls and bones. Wars in the more familiar sense of the term later became the business of proto-states and nation-states—Persia; the Greek city states of which Thucydides wrote in his account

of the Peloponnesian War; the Roman Empire; and on until today. In our own time, the sociologist and historian Charles Tilly, writing on the evolution of governance in Western Europe from the sixteenth to the eighteenth centuries, famously declared that “War made the state, and the state made war.”

As a corollary, we might add “War made technologists, and technologists made warfighting machines.” What began with artisanal fabrication of handheld weapons and crude barriers to keep marauders—whether humans or other animals—from entering prehistoric settlements would millennia later become a recognized occupation: military engineering, from which civil engineering split off in the seventeenth century. Engineers, along with naval architects and constructors, designed and produced forts and firearms; the sail-driven warships (as complex a technical system of its era as the B-29 was of the World War II years) such as those with which Great Britain controlled its empire; high explosives; rifled artillery; and much else.

Scientists going back at least to Galileo complemented and supplemented engineers’ efforts, worrying over the effects of gravity and air resistance on the range and trajectories of cannon balls and artillery shells. Much later, scientists such as Fritz Haber, the “father of chemical warfare,” and four other future Nobel laureates synthesized poison gases that spread terror across World War I battlefields. And during the next world war, the first electronic digital computers were built to replace tedious hand calculations for compiling ballistics tables, although mathematical models for designing nuclear warheads, including explorations of a possible hydrogen bomb, quickly took precedence.

Why did humans, once they advanced to become apex predators, continue to treat others of their species much as they did animals hunted for meat? Overy answers, persuasively, that warfighting cannot be directly linked to any single cause among the eight listed in his one-word chapter titles, presented in order here in italics: *biology* (war is wired into our genes, it’s our nature); *psychology* (it’s learned behavior, although perhaps partly instinctual); *anthropology* (weapons such as clubs and spears used to kill animals for protection or food could as easily be turned against other humans); *ecology* (faced with natural stressors such as drought, people looked for greener pastures; those already on the land fought to keep them out); *resources* (oil for Germany and Japan, among their other motives for starting World War II); *belief* (the Crusades, Marxist-Leninist ideology); *power* (some rulers can never get enough); and *security* (in an anarchic world with no superior authority to protect the weaker clan, community, or state from the stronger). Each concise chapter explores and synthesizes specialized literatures, to which Overy provides abundant citations. I am well versed in only a little of what he covers, such as international relations, but I came across nothing worth quarreling over.

Overy finds none of the eight explanatory categories adequate on its own. But taking them all together, by his reckoning, leaves no more than the barest hint that wars may disappear in the future. This is contrary to the arguments of others such as John Mueller, a political scientist, in *Retreat from Doomsday: The Obsolescence of Major War* (1989), and Steven Pinker, whose work centers on cognitive science, in *The Better Angels of Our Nature: The Decline of Violence in History and*

Its Causes (2011). “The causes of war have been persistent for millennia,” Overy writes. His conclusion is stark and compelling: “The idea that war is programmed to die out is impossible to reconcile with the crop of conflicts since 2000 or with the anticipated ecological crisis, resource stress, and religious conflict in the coming decades that could result in the kinds of war for which there is a long historical pedigree.”

Russia’s brutal invasion of Ukraine, not to mention civil wars in Syria and elsewhere, seem by themselves enough to suggest how similar our world is, in this sense, to that described by Marco Polo in the thirteenth century. In his *Travels*, Polo refers repeatedly to “constant warfare” in the lands he journeyed through or heard about, with tale after tale of pitched battles in which “the earth was stained scarlet with the blood of the fallen.”

From their beginnings as rational technical disciplines, engineering and the physical sciences have been entangled in warfighting. Even if only glancingly aware of what I have elsewhere called the US politico-military-industrial complex, scientists, engineers, and other technologists are enablers, given that knowledge in almost any technical domain can be weaponized. Artificial intelligence, once an arcane research field and now a preoccupation of politicians, pundits, and plutocrats, is simply the latest signifier. In the 1980s, the Pentagon enlisted bright lights from among that generation’s AI experts to work on projects such as robotic Army cargo vehicles (they crashed a lot). Now people worry about killer robots.

There is no question of the need for effective military systems. Weapons that work will be needed so long as the world is as Overy describes it. The questions are which systems, at what cost, for what

purposes, and at what sacrifice to other human needs? Unfortunately, the great majority of engineers avoid such matters, along with what is probably a somewhat smaller majority of scientists. In the United States, private organizations employ some 90% of the engineering workforce; as hired hands, engineers follow orders. So do the 70,000 or so civilian engineers and scientists employed by defense agencies, nearly all of whom report directly or indirectly to military officers. Some university scientists, less likely than engineering faculty to get dollars from defense agencies, seek to influence national security policy. They rarely succeed.

Unvarnished advice on military systems largely disappeared after then-President Richard Nixon, tired of the Office of Science and Technology and the President's Science Advisory Committee telling him things he didn't want to hear, axed them both. Later iterations of advisory bodies internal to government have mostly steered clear of military affairs, leaving technical choices to political officials and senior military officers. Few of these decisionmaking authorities have much grasp of the science base for weaponry or the technical ingredients of the highly complex warfighting systems developed at their command. Given the propensities for war highlighted by Overly, that seems no recipe for a sustainable future.

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