

# THE MILITARY-INDUSTRIAL VIRUS

How bloated budgets gut our defenses

By Andrew Cockburn



**F**or a country that spends such vast sums on its national security apparatus—many times more than the enemies that supposedly threaten it do—the United States has a strangely invisible military establishment. Military bases tend to be located far from major population centers. The Air Force’s vast missile fields, for instance, are hidden away in the plains of the northern Midwest. It is rare to see service uniforms on the streets of major cities, even Washington. Donald Trump did dream of holding a “beautiful” military parade down

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Pennsylvania Avenue, complete with “a lot of planes going over and a lot of military might,” but the Pentagon nixed the scheme by putting out word that the extravaganza would cost \$92 million. The estimate was surely inflated—it was four times greater, in real dollars, than the price tag for the 1991 Gulf War victory parade—suggesting that the military prefers a lower profile. It often takes an informed eye to appreciate signs of defense dollars at work, such as the office parks abutting Route 28 south of Dulles Airport, heavily populated with innocuously titled military and intelligence firms.

Largely out of sight, our gargantuan military machine is also increasingly

out of mind, especially when it comes to the ways in which it spends, and misspends, our money. Three decades ago, revelations that the military was paying \$435 for a hammer and \$640 for an aircraft toilet seat ignited widespread media coverage and public outrage. But when it emerged in 2018 that the Air Force was now paying \$10,000 for a toilet-seat cover alone, the story generated little more than a few scattered news reports and some derisive commentary on blogs and social media. (This was despite a senior Air Force official’s unblushing explanation that the ridiculous price was required to save the manufacturer from “losing revenue and profit.”) The Air Force now claims

to have the covers 3-D–printed for \$300 apiece, still an extravagant sum.

Representative Ro Khanna of California, a leading light of the Congressional Progressive Caucus who has spearheaded the fight to end U.S. participation in the Saudi war of extermination in Yemen, told me recently that he sees this indifference as a sign of the times. “There’s such cynicism about politics, such cynicism about institutions,” he said, “that the shock value of scandals that in the past would be disqualifying has diminished.” We were discussing another apparent defense rip-off, in which a company called TransDigm has been deploying a business model pioneered by the pharmaceutical industry. TransDigm seeks out unique suppliers of obscure but essential military components, such as a simple cable assembly, and buys the firm, quickly boosting the component’s price (by 355 percent in the case of the assembly). Khanna was particularly depressed that the Defense Department’s inspector general—whom he, along with Massachusetts Senator Elizabeth Warren and Ohio Representative Tim Ryan, had prompted to investigate the company—had concluded that TransDigm’s way of doing business was, in his words, “awful, but legal.” (Unsurprisingly, Wall Street loves the company; its stock price has doubled in the two years since Khanna first raised the issue.)

At a time when defense spending accounts for fifty-three cents out of every dollar appropriated by Congress, one might expect that the Pentagon would be under intense scrutiny by those who believe that the money is urgently needed elsewhere. Yet this is evidently not the case. Outrageous examples such as the toilet-seat cover or TransDigm come and go almost without comment, as does the ongoing trillion-dollar overhaul of the U.S. nuclear arsenal, which surely poses as great an existential threat to the planet as climate change. True, Bernie Sanders, Elizabeth Warren, and Tulsi Gabbard among the Democratic presidential contenders are campaigning for cuts in defense spending, but they all have spotty records when it comes to votes on military budget bills. The Progressive Caucus in the

House of Representatives has indeed pressed for a freeze on the Pentagon’s budget, along with “greater accountability and transparency in our Department of Defense,” but the former effort has been stymied by opposition from centrist Democrats and the latter demand lacks specifics. Justice Democrats, a leftist PAC that has recently emerged as a potent force behind newly elected progressives such as Alexandria Ocasio-Cortez, Ayanna Pressley, Ilhan Omar, and Rashida Tlaib, offers little detail on defense policy in its published platform beyond pledging to “End Unnecessary Wars and Nation Building.”

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### THE MILITARY-INDUSTRIAL COMPLEX COULD BE SAID TO BE CONCERNED, EXCLUSIVELY, WITH SELF-PRESERVATION AND EXPANSION

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When I asked Khanna what it means to be progressive on defense, he responded with similar language. “It means,” he answered, “to understand that our recent unconstitutional wars have not made America safe. That our military is overstretched. That we are in too many battlefields overseas. That we need far greater restraint in the use of our military.” For Khanna, the fault clearly lies with our aggressive foreign policy. “The reason the military budget is bloated,” he continued, “is because we’ve got too large a presence and footprint overseas in a way that isn’t making us safer.” But why should a handful of comparatively small-scale operations “overstretch” a military with its largest budget since World War II? All indications are that the actual reason behind the military’s bloated budget goes far beyond the ill-starred ventures of our twenty-first-century presidents, and has far more serious implications for both our defense and our society.

**I**n 1983, Chuck Spinney, a thirty-seven-year-old analyst in the Pentagon’s Office of Program Analysis and Evaluation, testified to Congress that the cost of the ever-more complex

weapons that the military insisted on buying always grew many times faster than the overall defense budget. In consequence, planes, ships, and tanks were never replaced on a one-to-one basis, which in turn ensured that the armed forces got smaller and older. Planes, for instance, were kept in service for longer periods of time and were maintained in poor states of repair owing to their increasing complexity. As to be expected, the high command did not react favorably to these home truths. They allowed Spinney to keep his job but stopped assigning him anything of importance. He spent the rest of his career ensconced in a Pentagon office at the heart of the military-industrial machine, pondering and probing its institutional personality. Retiring in 2003, he maintained a steady output of pungent analyses of its workings. In a 2011 essay, “The Domestic Roots of Perpetual War,” he discussed the pattern of “military belief systems and distorted financial incentives” that produced “a voracious appetite for money that is sustained by a self-serving flood of ideological propaganda.” Delving deep into the historical details of Pentagon spending, Spinney illustrated his analyses in the form of intricate charts that not only tracked the actual dollar amounts expended but also showed how the projected budgets for various ambitious weapons-buying plans had never materialized, at least never to the degree necessary to buy the projected number of weapons systems—hence the shrinking forces.

Late in 2018, Spinney’s longtime friend Pierre Sprey, a former Pentagon “whiz kid” revered for codesigning the highly successful A-10 and F-16 warplanes, and a trenchant critic of defense orthodoxy, suggested to Spinney that he add a novel tweak to his work by depicting budget changes from year to year in terms of percentages rather than dollar amounts. The analysis that Spinney produced at Sprey’s suggestion revealed something intriguing: although the U.S. defense budget clearly increased and decreased over the sixty years following the end of the Korean War, the decreases never dipped below where the budget would have been if it had simply grown at

5 percent per year from 1954 on (with one minor exception in the 1960s). “Amazingly,” emphasized Spinney,

this behavior even held true for the large budget reductions that occurred after the end of the Vietnam War and, more significantly, after the end of the Cold War. It is as if there is a rising floor of resistance, below which the defense budget does not penetrate.

Only during Obama’s second term did it first dip below this level with any degree of significance. Even more interestingly, every single time the growth rate had bumped against that floor, there had been an immediate and forceful reaction in the form of high-volume public outcry regarding a supposedly imminent military threat. Such bouts of threat inflation invariably induced a prompt remedial increase in budget growth, regardless of whether the proclaimed threat actually existed. As General Douglas MacArthur remarked, as far back as 1957: “Always there has been some terrible evil at home or some monstrous foreign power that was going to gobble us up if we did not blindly rally behind it by furnishing the exorbitant sums demanded. Yet, in retrospect, these disasters never seem to have happened, never seem to have been quite real.”

In 1960, for example, as President Eisenhower was getting ready to denounce the dangerous power of what he would christen the military-industrial complex, the growth rate was pressing against the 5 percent floor. On cue, there appeared the fraudulent specter of a “missile gap” favoring the Soviets. The incoming Kennedy Administration duly opened the budgetary tap. A slowdown a few years later, as Kennedy tried to apply the brakes and free up money for domestic initiatives, was reversed under Johnson with the first major escalation in Vietnam. The end of that war again brought the rate down to 5 percent. True to form, there arose a chorus of alarms about the rising menace of Soviet military power: the CIA up-

wardly revised its estimates of enemy weapons prowess and spending; the Pentagon asserted that our nuclear forces faced a “window of vulnerability.” The consequent spend-up accelerated sharply in the Reagan years, ultimately peaking at a record growth rate of 10 percent.

The end of the Cold War, which had underpinned the entire enterprise, might have been expected to bring a change. But no, the 5 percent limit held firm, and before too long the growth



rate rose again as Clinton expanded NATO, thereby ensuring tense relations with Russia for the foreseeable future. The 9/11 attacks and the Bush–Obama wars pushed the year-on-year increases into overdrive until the rate dipped slightly below the 5 percent line in 2015. Donald Trump, for all his bombast about restoring the military, was at first apparently unwilling to undo this particular aspect of the Obama legacy—his initial budget plan for 2020 even featured an absolute decline in spending, from \$717 billion to \$700 billion. This aberration was brief, however. Following outcry from the military’s representatives in Congress, Trump reversed course and dutifully boosted the projected amount to \$750 billion, just shy of the historical status quo.

Now that the Democratic establishment, long wedded to the notion that Vladimir Putin somehow engineered the election of Donald Trump, have become as obsessively hawkish on the subject of Russia as any Republican, it seems likely that the line will soon climb north of 5 percent and stay there for years to come. Reports that the Russians, despite having a defense budget less than a tenth the size of ours, are somehow outpacing us in the development of weapons such as chimerical hypersonic missiles go

largely unchallenged. Moscow’s latest submarines, ships, tanks, cyberweapons, and supposed mastery of “hybrid” warfare are regularly invoked to justify a level of spending that, even accounting for inflation, now runs almost double the Cold War average.

**T**his entire process, whereby spending growth slows and is then seemingly automatically regenerated, raises an intriguing possibility: that our military-industrial complex has become, in Spinney’s words, a “living organic system” with a built-in self-defense reflex that reacts forcefully whenever a threat to its food supply—our money—hits a particular trigger point. The implications are profound, suggesting that

the MIC is embedded in our society to such a degree that it cannot be dislodged, and also that it could be said to be concerned, exclusively, with self-preservation and expansion, like a giant, malignant virus. This, of course, is contrary to the notion that our armed forces exist to protect us against foreign enemies and impose our will around the globe—and that corruption, mismanagement, and costly foreign wars are anomalies that can be corrected with suitable reforms and changes in policy. But if we understand that the MIC exists purely to sustain itself and grow, it becomes easier to make sense of the corruption, mismanagement, and war, and understand why, despite warnings over allegedly looming threats, we remain in reality so poorly defended.

That latter point may seem counterintuitive. Pentagon critics like Khanna tend to focus on the misuse of our military power, such as in the wars in Yemen or Afghanistan, and on the need to reallocate money away from defense to address pressing social needs. These are certainly valid approaches, but they overlook the fact that we've been left with a very poor fighting force for our money. The evidence for this is depressingly clear, starting with our bulging arsenal of weapons systems incapable of performing as advertised and bought at extraordinary cost. Some examples, such as the F-35 Lightning II fighter planes bought by the Air Force, Navy, and Marines, have achieved a certain muted notoriety and served as the occasional butt of jokes made by comedians on cable TV. Yet there is little public appreciation of the extent of the disaster. The F-35 first saw combat last year, seventeen years after the program began. The Marines sent just six of them on their first deployment to the Middle East, and over several months only managed to fly, on average, one combat sortie per plane every three days. According to the Pentagon's former chief testing official, had there been opposition, these "fighters" could not have survived without protection from other planes. The most expensive weapons program in history at a projected cost of \$406 billion, the F-35 initially carried a radar whose frequent freezing required the pilot to regularly switch it on and off. While the radar problem was eventually corrected, the Air Force version of the plane still features an unacceptably inaccurate gun that remains to be fixed, though the Air Force claims to be working on it.

The Navy is in possibly worse shape. Mines, to take one striking example, are a potent naval weapon and ubiquitous among our potential enemies. Fear of mines caused the United States to cancel a major amphibious landing during the Korean War, and concerns over possible Iraqi mines prevented a planned seaborne assault on Kuwait during the 1991 Gulf War. A single mine (and Iran has thousands of them) in the Strait of Hormuz, through which a third of

the world's oil transported by sea passes every day, would throw markets into total chaos. Yet the Navy currently possesses a mere eleven minesweepers, dilapidated vessels long past retirement age, with just four available for the entirety of the Middle East. Fifteen of the new and failure-ridden class of Littoral combat ships, known to crews as "little crappy ships," will supposedly be dedicated to mine-hunting and mine-sweeping, but none of their specialized equipment—designed to detect and disable mines, including underwater drones—has been found to work. A July 2018 report from the Defense Department's inspector general found that the Navy deployed the relevant systems "prior to demonstrating that the systems were effective." Asked to comment, the Navy nevertheless claimed that everything works or, as in the case of the underwater drone, insisted they are "on track" to produce something that does.

Thus the lion's share of our defenses against mines must be borne by a small, decaying fleet of huge MH-53E helicopters that search and destroy mines by towing large sensor-laden sleds through the ocean. The MH-53E, and its variant for the Marines, the CH-53E, are lethal machines—lethal, that is, to those who operate them. According to the journalists behind the documentary *Who Killed Lt. Van Dorn*, the helicopters have crashed 58 times and killed 132 crew and contractors since their introduction in the 1980s, making them the most dangerous aircraft in the U.S. military.

The Navy's shortcomings have been most vividly highlighted by a plethora of scandals in the Seventh Fleet, which operates in the western Pacific. In recent years, Leonard Glenn Francis, a contractor known as "Fat Leonard" who serviced the fleet's port visits around Asia and held over \$200 million in contracts, was found to have been bribing a wide range of officers, among them senior admirals, with lavish entertainment—including drunken parties that lasted days and featured a group of prostitutes known as the "Thai SEAL team"—as well as cash, to secure overpriced contracts. It also emerged that fleet movements had at

times been dictated not by the Navy's strategic requirements but by officers repaying Francis's hospitality by directing ships to ports where he stood to make the most money. Though whistle-blowers had been sounding the alarm for years, their complaints were routinely suppressed by officers on Francis's payroll. When the Navy finally got around to investigating his activities, in 2010, no fewer than sixty admirals fell under suspicion. To date, sixteen officers, serving and retired, have been found guilty of bribery, fraud, and related crimes, while a further twelve are awaiting trial. Another 550 active-duty and retired military personnel were investigated, although the statute of limitations precluded prosecution in some cases.

Meanwhile, the fleet itself has been progressively deteriorating, as became tragically evident when two destroyers, the U.S.S. *Fitzgerald* and the U.S.S. *John S. McCain*, collided with merchant vessels in Asian waters in 2017, leaving a total of seventeen sailors dead. The disasters were found to be the direct consequence of incompetent commanders and ill-trained, overworked, shorthanded crews struggling to operate broken-down equipment they did not know how to repair. The failures in leadership, investigations revealed, extended all the way to the top of the chain of command.

**T**he Army and Marines present a hardly less depressing picture. For decades, the Army has been engaged in an expensive struggle to supply troops with reliable radios. One recent portable model, which the Institute for Defense Analyses found would cost \$72,000 each, is called the Manpack. Not only is the Manpack twice as heavy as the model it replaces, with a shorter range, but it has displayed a tendency to overheat and severely burn the unfortunate infantrymen carrying it. The helmets worn by soldiers and Marines in Iraq and Afghanistan have also been shown to be faulty. As the authors of the recent book *Shattered Minds* have demonstrated, their design can actually *amplify* the effects of an explosion on one's brain. Furthermore, many of the helmets have been found to be dangerously vulnerable to bullets and

shrapnel, thanks to a corrupt contractor skimping on the necessary bullet-proof material. As is common with those who speak up about official malpractice, the whistle-blowers who exposed this particular fraud were viciously harassed by their superiors and driven out of their jobs.

Scholarly commentators and pundits generally shrink from ascribing base pecuniary motives to the military-industrial complex. Thus, one recent academic study of the reasons behind declining force numbers finds the answer in “an American cultural disposition favoring technology,” suggesting that our military leadership is driven to pour funds into technologically complex weapons systems, thereby skimping on troops’ basic needs, by some innate cultural imperative. The reality would seem to be somewhat simpler: the MIC has a compulsion to demand and receive more of our money every year. Contrary to common belief, this imperative does not mean that the budget is propelled by foreign wars. Rather, the wars are a consequence of the quest for bigger budgets. Recently, the Pentagon even proposed a war budget that won’t be spent on a war. The proposed 2020 budget includes \$165 billion for “Overseas Contingency Operations” (O.C.O.), a special category invented in 2009 to support ongoing wars, rather as if a police department demanded extra money for catching criminals. In previous years, large chunks of this money have been quietly diverted to more urgent Pentagon priorities, such as funding new weapons programs. But now the diversion has become official—the budget request acknowledges that \$98 billion of the O.C.O. money is for routine “base requirements,” rather than fighting abroad.

In other words, it’s all about the Benjamins. Understanding this fundamental fact makes it easier to understand the decisions underlying our defense policy. Why, for example, was the Seventh Fleet sent to sea on unnecessary deployments with short-handed crews and broken equipment? The answer, according to an investigation by *ProPublica*, was that senior officials in Washington, led by Ray Mabus, secretary of the Navy through-

out the Obama presidency, and the chief of naval operations, Admiral Jonathan Greenert, were determined to funnel as much money as possible into building more ships, a decision that proved quite profitable for politically influential shipyards. Why do we maintain a vulnerable land-based missile force as well as an invulnerable submarine-based one? Because eliminating the Air Force’s ICBMs would entail a severe blow to the Air Force budget and defense contractors’ balance sheets.

We’re left with a fighting force that needs to rely on loved ones for vital needs such as armor and night-vision goggles, while we throw hundreds of

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### THE DEFENSE BUDGET IS NOT PROPELLED BY FOREIGN WARS. THE WARS ARE A CONSEQUENCE OF THE QUEST FOR BIGGER BUDGETS

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millions of dollars at exotic contraptions such as the Compass Call NOVA, a completely dysfunctional aircraft tasked with detecting I.E.D.s. The pattern such boondoggles follow is predictable: the services insist that new weapons are needed to replace our rapidly obsolescing fleets. Inevitably, unforeseeable and rapid enemy advances require new and more “capable” weapons, costing 50 to 100 percent more than their predecessors. The presumption that more capable weapons must cost more generally goes unquestioned, despite the fact that prices for more advanced personal computers and other civilian technologies have moved in the opposite direction. Once budgets for an optimistically priced new weapon are approved by the Pentagon leadership and Congress, a program schedule is devised so that no single failure to meet a deadline or pass a test can threaten the flow of funding. In addition, the contract, inevitably of crushing complexity, is designed to ensure the contractor gets paid to cover any and all technical and management failures, which generally guarantees another doubling or tripling of the cost beyond the originally inflated estimate.

This process is little understood by the outside world, which is why taxpayers are prepared to accept a \$143 million price tag on an F-22 fighter (that’s just the Lockheed sticker; the real price per plane was over \$400 million) as somehow justified by its awesome technological capabilities. The late A. Ernest Fitzgerald, who was fired from his job as a senior Air Force cost-management official on the direct orders of President Nixon for divulging excessive spending on an Air Force program, used to point out that \$640 toilet seats and \$435 hammers (he was the first to bring these to public attention) were merely emblematic of the whole system, and that items such as a \$400 million fighter were no more reasonably priced than the toilet seat.

The beauty of the system lies in its self-reinforcing nature. Huge cost overruns on these contracts not only secure a handsome profit for the contractor but also guarantee that the number of weapons acquired always falls short of the number originally requested. For example, the Air Force first planned to buy 750 F-22s at a projected cost of \$139 million apiece, but rising costs compelled the defense secretary at the time, Robert Gates, to cancel the program in 2009, capping the fleet at 187. With reduced numbers, weapons systems are kept in service longer: the Air Force’s planes average twenty-eight years in service, and some still in use were built well over half a century ago. The F-35, for example, costs almost six times more than the F-16 it is replacing, while the Navy’s Zumwalt-class destroyer (\$7.5 billion each) costs four times more than the Arleigh Burke destroyers it was supposed to replace. (The Zumwalt’s overruns were so enormous that although the original plan called for thirty-two ships, production was cut to just three.) On occasion, the system reaches the ultimate point of absurdity when gigantic sums are expended with no discernible results. Such was the case with Future Combat Systems, a grandiose Army program to field ground forces of manned vehicles, robots, and assorted weaponry, all linked via electronic networks, and with Boeing as the prime contractor. Twenty billion dollars later,

the enterprise was shuttered, an extensive exercise in futility.

**E**normous outlays for marginal or even nonexistent returns attract little attention, let alone objection, among our politicians. Congress routinely waves through the Pentagon's budgets with overwhelming bipartisan majorities. Part of the reason for this must lie in the belief that defense spending is a bracing stimulant for the economy and for the home districts of members of Congress. This point was spelled out with commendable clarity in a March *New York Times* op-ed by Peter Navarro, director of the White House Office of Trade and Manufacturing Policy. The occasion was Trump's impending visit to the Lima, Ohio, plant that manufactures the U.S. Army's Abrams tank. Touting Donald Trump's role in expanding tank production (though the Army already has a huge surplus of tanks in storage), Navarro laid out the economic benefits for both Lima and Ohio, claiming the plant would employ more than one thousand people there and thousands more across the nation. "Consider," he wrote, "the ripple effects of the Lima plant. In Ohio alone, 198 of its suppliers are spread out across the state's 16 congressional districts." Few elected representatives could miss the point, including the state's liberal Democratic senator, Sherrod Brown, who had worked alongside Republican lawmakers to boost funding for the project. Major contractors have turned the distribution of defense contracts across as many congressional districts as possible into a high art. Contracts and subcontracts for Lockheed's F-35, for example, are spread across 307 congressional districts in forty-five states, thus ensuring the fealty of a commensurate number of congresspeople as well as ninety senators.

The jobs argument holds sway even when an embrace of defense spending would seem to violate alleged political principles. For example, the F-35 is due to be stationed in Vermont at Burlington International Airport, home of the Vermont Air National Guard. Because the F-35 is at least four times noisier than the F-16s it will replace, large swaths of the sur-

rounding low-cost neighborhood, by the Air Force's own criteria, will be rendered unfit for residential use, trapping some seven thousand people in homes that will only be sellable at rock-bottom prices. Nevertheless, the F-35 proposal enjoys political support from the state's otherwise liberal elected leadership, notably Senator Bernie Sanders, who has justified his support on the grounds that, while he is opposed to the F-35, he supports its being stationed in Vermont from the perspective of job creation.

Yet deeper scrutiny indicates that defense contracts are not particularly efficient job generators after all. Robert Pollin and Heidi Garrett-Peltier of the Political Economy Research Institute at the University of Massachusetts Amherst have calculated the number of jobs spawned by an investment of \$1 billion in various industries, ranging from defense to health care, renewable energy, and education. Education came in first by a wide margin, producing 26,700 jobs, followed by health care at 17,200. Defense, generating 11,200 jobs, ranked last. "All economic activity creates some employment," Pollin told me. "That isn't at issue. The relevant question is *how much* employment in the U.S. gets created for a given level of spending in one area of the economy as opposed to others." The fact is that defense spending generates fewer jobs than green energy, education, and other critical industries.

Studies such as these are rare. Research on the impact of defense spending on the U.S. economy as a whole is rarer still, even though weapons account for about 10 percent of all U.S. factory output. A generation ago, Seymour Melman, a professor of industrial engineering at Columbia, devoted much of his career to analyzing this very subject. He concluded that defense spending's impact on the broader economy was wholly harmful, a consequence of the bad habits injected into the bloodstream of American manufacturing management by a defense culture indifferent to cost control and productivity. The U.S. machine-tool industry, for example, had powered postwar U.S. manufacturing dominance thanks to its cost-effective productivity that in turn allowed high

wage rates for workers. But, Melman wrote, as more and more of its output shifted to defense contracts, the industry's relationship with the Pentagon

became an invitation to discard the old tradition of cost minimizing. It was an invitation to avoid all the hard work ... that is needed to offset cost increases. For now it was possible to cater to a new client, for whom cost and price increase was acceptable—even desirable.

In consequence, as Melman detailed, the U.S. machine-tool industry gradually ceased to compete effectively with nations such as Germany and Japan, where cost control still reigned supreme.

**O**f course, some sections of postwar U.S. manufacturing indebted to defense dollars still led the world, most notably civilian aircraft as represented by the Boeing Company. The airliners that rolled out of its Seattle plant were well designed, safe, and profitable. Boeing had a huge defense component as well, but senior management reportedly enforced an unwritten rule that managers from the defense side should never be transferred to the civilian arm, lest they infect it with their culture of cost overruns, schedule slippage, and risky or unfeasible technical initiatives.

That began to change in 1997, when Boeing merged with McDonnell Douglas, a defense company. In management terms, the merger was in effect a McDonnell takeover, with its executives—most importantly CEO Harry Stonecipher—assuming command of the combined company, bringing their cultural heritage with them. The effects were readily apparent in the first major Boeing airliner initiative under the merged regime, the 787 Dreamliner. Among other features familiar to any student of the defense industry, the program relied heavily on outsourcing subcontracts to foreign countries as a means of locking in foreign buyers. Shipping parts around the world obviously costs time and money. So does the use of novel and potentially risky technologies: in this case, it involved a plastic airframe and all-electronic controls powered by an extremely large and dangerously flammable battery. All

this had foreseeable effects on the plane's development schedule, and, true to form for a defense program, it entered service three years late. This technology also had a typical impact on cost, which exceeded an initial development estimate of \$5 billion by at least \$12 billion—an impressive overrun, even by defense standards. Predictably, the battery did catch fire, resulting in a costly three-month grounding of the Dreamliner fleet while a fix was devised. The plane has yet to show a profit for the corporation, but expects to do so eventually.

The two recent crashes of the Boeing 737 Max, which together killed 346 people, were further indications that running civilian programs along defense-industry lines may not have been the best course for Boeing. The 737 had been a tried and true money-spinner with an impressive safety record since 1967. Several years ago, however, under the auspices of CEO Dennis Muilenburg, previous overseer of the Future Combat Systems fiasco, and Patrick Shanahan (currently the acting secretary of defense), who had headed up Boeing's Missile Defense Systems and the Dreamliner program before becoming general manager of Boeing's commercial airplane programs, the airliner was modified in a rushed program to compete with the Airbus A320. These modifications, principally larger engines that altered the plane's aerodynamic characteristics, rendered it potentially unstable. Without informing customers or pilots, Boeing installed an automated software Band-Aid that fixed the stability problem, at least when the relevant sensors were working. But the sensors were liable to fail, with disastrous consequences. Such mishaps are not uncommon in defense programs, one such instance being Boeing's V-22 Osprey troop-carrying aircraft (supervised for a period by Shanahan) in which a design flaw, long denied, led to multiple crashes that killed thirty-nine soldiers and Marines. But the impact of such disasters on contractors' bottom lines tends to be minimal, or even positive, since they may be paid to correct the problem. In the commercial market, the punishment in terms of

lost sales and lawsuits are likely to be more severe.

In the immediate aftermath of the Cold War, before tensions with Russia were reignited, the BDM Corporation, a major defense consulting group, received a Pentagon contract to interview former members of the Soviet defense complex, very senior officials either in the military or in weapons-production enterprises. Among the interesting revelations that emerged (which included confirmation that U.S. intelligence assessments of Soviet defense policy had been almost entirely wrong throughout the Cold War) was an authoritative account of how disastrous the power of the military-industrial complex had been for Soviet defense and the economy. BDM learned that "the defense-industrial sector used its clout to deliver more weapons than the armed services asked for and to build new weapons systems that the operational military did not want." A huge portion of Soviet industrial capacity was devoted just to missile production. "This vast industrial base," according to one former high-ranking bureaucrat, "destroyed the national economy and pauperized the people." Calls for cuts in this unnecessary production were dismissed by the Kremlin leadership on grounds of "what would happen to the workers." The unbearable burden of the Soviet military-industrial complex was undoubtedly a prime cause of the ultimate collapse of the Soviet state—the virus had consumed its host.

The BDM contract had been issued in the belief that it would confirm a cherished Pentagon thesis that the sheer magnitude of U.S. spending, particularly the huge boost initiated in the Reagan years, had brought down the Soviets by forcing them to try to compete—a welcome endorsement for mammoth defense budgets. But the ongoing BDM project, even before the researchers finished their work, made it clear this was not what had happened; the Soviet burden was entirely self-generated for internal reasons, such as maintaining employment. When Pentagon officials realized that BDM's research was leading toward this highly unwelcome conclusion, the contract was abruptly terminated. The system knows how to defend itself. ■

# MY LIFE IN THE SERVICE

THE WORLD WAR II DIARY OF  
GEORGE MCGOVERN

Naval Aviation Observer

With an introduction by Andrew J. Bacevich

## MY LIFE IN THE SERVICE



The World War II Diary of  
GEORGE MCGOVERN

**MY LIFE IN THE SERVICE**  
FEATURES A FACSIMILE OF  
THE DIARY GEORGE MCGOVERN  
KEPT FROM HIS FIRST DAYS OF  
BASIC TRAINING TO THE END OF  
THE WAR. HASTILY JOTTED IN  
HIS EXACTING HAND (A TYPED  
TRANSCRIPTION IS INCLUDED),  
THE PAGES CONVEY THE  
IMMEDIACY OF MCGOVERN'S  
WARTIME EXPERIENCES.

INTRODUCTION BY  
ANDREW J. BACEVICH  
CONTRIBUTING EDITOR  
OF HARPER'S MAGAZINE

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