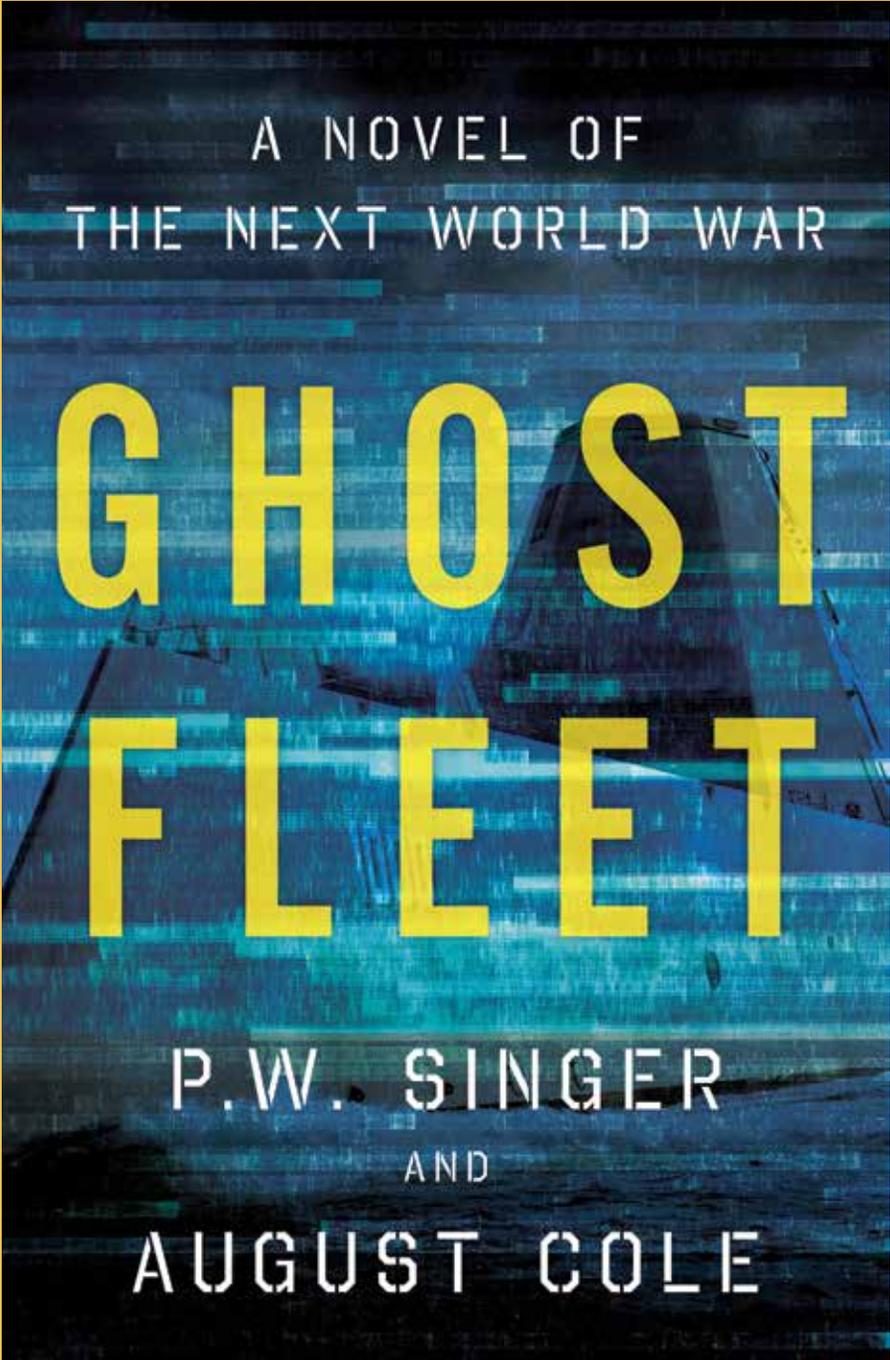


A NOVEL OF  
THE NEXT WORLD WAR

# GHOST FLEET



P.W. SINGER  
AND  
AUGUST COLE

# Book Reviews

## Ghost Fleet: A Novel of the Next World War

By P.W. Singer and August Cole  
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### REVIEWED BY BRENDAN ORINO

The year is 2035 and Chinese strategic patience has finally paid off. After decades of standing by, watching the United States parade its naval assets unimpeded through the Pacific and park its aircraft and personnel in its own strategic backyard, the Directorate—an alliance of convenience between China and its very junior partner Russia—strikes a near-fatal blow against America’s technologically advanced, but network dependent, global defense enterprise. In search of natural resources and hungry for the international prestige denied to them for years, revenge has been a long time coming.

This is the setting for P.W. Singer and August Cole’s forthcoming novel, *Ghost Fleet*. Drawing from their work on emerging military technology, new domains of conflict, and future warfare concepts, the authors open with a dystopian display of American military might, where everything that could go wrong does and in which the adversary has

near-omnipotent visibility on every operational and tactical action taken. The United States’ futuristic defense technologies and platforms of today, from the DDG 1000 guided missile destroyers to F-35 fifth generation fighters, are but obsolete relics, having proven less than successful from their first days in action. Promising to do everything, they did very little well.

And what is worse, when called into the fray America’s most advanced weaponry, in addition to supplies of chemical and biological soldier enhancements, are either fully compromised or knocked offline by their own hi-tech nature or exposure to foreign supply chains. In a world where Google Glass equivalents are as ubiquitous as smart phones and cocktails of tailored stimulants have replaced caffeine (although coffee is still downed by the kitsch mugful), greater connectivity and globalization are not the panacea many still cast them as today. Instead, bringing countries like China into the international fold has given it surreptitious access through network-dependent hardware and domestic manufacturing facilities. Just as scary, China has usurped the employment of autonomous, robotic weapons—a field in which America once dominated—utilizing swarm after swarm of quadcopters and autonomous torpedoes where helicopter gunships and submarines once reigned supreme. They have also managed to perfect the tracking of nuclear reactors at sea to give its anti-ship missiles pinpoint accuracy, and space-based lasers make anti-satellite operations a breeze.

But even on the edge of defeat, Americans prove resilient and even devious, their exploits playing out in odes to American wars of the past and intelligence tradecraft reminiscent only of James Bond’s dreams. After his and his

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crew's escape from China's surprise attack on Pearl Harbor, Commander Jamie Simmons becomes a cause célèbre among his reeling Navy comrades and a despondent public. A female Marine leads a rag tag Hawaiian insurgency against Directorate occupation, keeping in mind lessons from Iraq and Afghanistan, and even calling themselves mujahedeen. Civilians play their part as well, from a brilliant energy scientist looking to revive the energy zapping rail-gun to a lone assassin, picking off high-profile Chinese citizens and soldiers to sow fear in their ranks.

Other American strengths do not go underestimated. Silicon Valley wiz-kids and genius computer programmers seek to topple the Directorate's cyber capabilities just for the challenge, and companies like Wal-Mart turn their vaunted logistics operations into weapons of efficiency. Anonymous, the international network of hactivists (perhaps one and the same as those patriotic Silicon Valley nerds), does digital battle with Hainan, although an actual alliance with the United States seems dubious.

Woven into this thriller are attempts to put in better perspective potential wars of the future, their complexity, and our own vulnerabilities. What is made quite plain is that while American technological advantage, business acumen, and scientific expertise are world class, their continued dominance, and more worryingly their excellence, is not inevitable. Enemies are more than capable of hacking American government networks, stealing weapons plans from defense contractors, and exfiltrating sensitive data from private American firms, putting national security at risk.

Singer and Cole open with a terrifying salvo, one in which America's enemies control

nearly every domain—space, air, sea, land, and cyber. This control puts our nation's aforementioned strengths and trends in a different, less attractive light. What happens when American military networks, systems, and weapons stop functioning? Could our forces really fall back to non-networked communications (think letters and flag signals)? Could our warships navigate effectively without the global positioning system? Failure to adapt is certainly a danger for the military, but so too is any over-reliance on technology.

More fundamental and basic skills, however, are on display when the "Ghost Fleet," non-nuclear, aging, and outdated ships from the 2010s, is called into action. Sailors, marines, soldiers, and airmen are put to the test, forced to operate without satellite communications, advanced command and control and targeting systems, and guided weaponry. Face-to-face with an enemy operating near-peer stealth platforms—probably made from stolen American designs—modern naval vessels, and effective cyber operations, the United States is no longer up against the once-maligned yet effectively persistent insurgents of the Middle East. With its technological overmatch diminished, America is fighting a very different war.

And while some things in this war are different, many others stay the same, albeit with various twists. Predictably, privateers appear ready to aid the American military effort, although this time they are financed by one of the world's richest men, sporting a diamond covered spaceship. Despite his individual eccentricity, he still finds inspiration in one of the most fearsome, but infamous contractors of wars past—Blackwater. Intelligence gathering goes much the same way, but instead of listening in on phone calls or intercepting

cables, the enemy is monitoring social media accounts to track fleet movements. Remember those Apache helicopters destroyed by Iraqi insurgents in 2007 after American soldiers posted geotagged photos to the web?

Of course, the enduring human elements of conflict are not forgotten. The sorrow of watching spouses, siblings, and parents ship off for the unknown is as heartbreaking as ever. But their sorrow is only matched by the elation upon their return, and the true despair when some do not. The family drama is real, but so is the sense of individual and collective duty, sacrifice, and fraternity. What's different, however, is who makes up this force of the future: gay men and women, female generals and admirals, a large number of Hispanics and Asians. Singer and Cole are right to point out that change in the ranks impacts the health of the force; in the end, it's not just what equipment or weapons are being fielded, but how they are being operated and by whom.

With nearly 350 footnotes, this work of fiction draws on the forefront of military science, research, and development. But what makes this work special is the authors' projections 20 years into the future; while it's true that today's military tries to think that far ahead, official reports do not always do creative justice to the tools at our service-members disposal. Uninhibited by the budget battles on Capitol Hill, the molasses-slow acquisitions process at the Pentagon, or the general political gridlock that pervades D.C., Singer and Cole bring their knowledge to bear in imaginative and original ways. To quote their own Pushkin-loving Russian colonel, "If there's one thing I am going to teach you, it's to stop thinking that things can work only the way you've been told they're supposed to. You can't win a war that way."

In their not-so-veiled criticism of today's military investments, Singer and Cole, both students of trends in military weaponry, kit, and communications, question the required "jointness" of large acquisition projects that water down their technical breakthroughs for the sake of interoperability and an overly broad array of requirements. But they are sure to highlight promising research in other areas with potentially breakthrough effects: wearable electronics, nanotechnology, 3-D printing, advanced textiles, and robotics are only a few among them. To their credit, they are also sure to note larger demographic trends, particularly among the millennial generation, and the impact they will have on the force of the future.

As they repeatedly harken back to previous conflict, Singer and Cole insist that this new fighting force truly internalize some of the most glaring lessons of wars past. In an attempt to keep history from repeating—or even rhyming, for that matter—leaders need to have a keen sense of history and its implications for future conflict. Technology and those who wield it may change, but those who neglect to understand the past are often doomed to repeat it. In the oft-quoted words of Sun Tzu, a strategist whose wisdom permeates the pages of *Ghost Fleet*, "He will win who, prepared himself, waits to take the enemy unprepared."

Instead of tackling the revolution in military affairs, third offset, Moore's law, demographics or other theories of technological revolution and military transformation in isolation, *Ghost Fleet* provides a glimpse of an adaptive, advanced, and complex force put to the test when its strengths become weaknesses. The authors' flare for action and adventure, combining the human experience of war with

a respect for groundbreaking science and an appreciation for history, makes the story all the more ambitious. Besides, it never hurts that the good guys mount a comeback. **PRISM**