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BOOK REVIEW:
Imagining the Third World War
Ghost Fleet: a novel of the next world war
By P W Singer/August Cole
(Eamon Dolan/Houghton Mifflin Harcourt 2015)

"There's a fine line between fiction and non-fiction" the Texas country singer Kinky Friedman once wrote, "and I think I snorted it somewhere in 1979". When you deal, not with science fiction but science fact set in a fictional context, then you need to ensure that you remain within hailing distance of reality; you need to ensure in a word, that you don't get stoned. The authors of this novel are sober-headed about the likely realities of a world war involving the United States, Russia and China which is why their book makes such disturbing (if enjoyable) reading.

In the aftermath of a devastating surprise attack on Pearl Harbor, the US is forced to draw down on its 'ghost fleet' - its mothballed ships including one of the most powerful of all, the *USS Zumwalt*, a real ship now under construction, a guided-missile destroyer which runs on six million lines of code. Towards the end of the novel, much of the action emanates from the decisions taken on the *Zumwalt*'s Ship Mission Center.

This is a future in which war has gone digital, and it is no longer played out just by the 'uniforms'. American veterans become low-tech insurgents; teenage hackers come into their own; Silicon Valley billionaires fight it out with extreme prejudice. In the novel, after sinking most of each other's fleets, they draw back from Armageddon. Spoiler Alert: American enterprise and ingenuity allows the United States to retake Hawaii and bring the war to an end before it escalates into the nuclear stage.

Such a synopsis does little justice to the book's narrative flow, which is surprisingly uncomplicated given its huge cast of characters. Ultimately, of course, a novel like this stands or falls, not on its fictional strengths - its characterisation, or even plotting - but its technological savvy. Singer is a Senior Fellow at the New America Institute and a writer who has his finger on the pulse whether it is dealing with robots (*Wired for War*) or private security companies (*Corporate Warriors*), and most recently, cyberspace. Cole is a former journalist from the *Wall Street Journal* and an international security expert at the Atlantic Council. What they've concocted is a technological nightmare amply backed up by pages of footnotes referencing the latest advances in military technology.

What are the technological surprises? One is the vulnerability of America's high-tech systems. A Joint Strike Fighter is shot down by a drone launched missile. The plane's anti-missile technology is sabotaged by replacement parts that have been infected by malicious codes which turn a missile-evasive system into a missile-attraction one. In a game played by the Pentagon in 2013 that envisaged a war with China seven years hence, the US Navy discovers that viruses have been incubating for months in the computer systems of its aircraft carriers. On the day conflict breaks out it finds it has to launch planes manually from the decks as it did in 1942. In this scenario, China's secret

weapon is a piece of computer code that can adapt, appear and disappear, leaving the US reliant on satellite based communication.

But in *Ghost Fleet*, America's satellites come under attack. Here too the authors are extrapolating from what is already under development. The Chinese fired an ASAT missile in 2007 which destroyed one of their own satellites in space, and is estimated to have created more than 2m pieces of space debris up to 10cm in size, as well as 2,500 larger objects which can be routinely tracked by earth-based sensors. In the eight years that have passed since the Fengyung Intercept, the Chinese have missiles that can now reach much deeper into space.

Then there is the ultimate cyberspace nightmare. In the novel, everything is disabled, from smart cleaning toilets to smart refrigerators in American homes. The Internet-of-Things is almost here, with hundreds of millions of 'things' from cars to central heating boilers wirelessly connected to networks that will give governments (as well as terrorists) the opportunity to sow mayhem. We are creating thanks to technological networking a historically unprecedented degree of vulnerability.

And then there are the battles in the novel that utilise all the new technologies under development today, like the US Navy's new rail gun. The death rays of science fiction have now been reconfigured as solid-state laser weapons. The US Navy fired its first in the Persian Gulf early last year. At the micro-level, the soldiers on both sides use 'viz' glasses through which they are able to download information on everything. One advantage of an internet contact lens is that the ionic nerve is a direct extension of the human brain and both transmit information at a rate exceeding a high-speed internet connection.

But if the authors were just dwelling on technology *Ghost Fleet* would not be such a compelling read. World War Three is determined in the end on every front - by industrial magnates as well as warrior geeks, by insurgents fighting against the Chinese occupiers in Hawaii using low-tech options. War has a character, Clausewitz tells us, and that character is the theme of the novel.

For me, the novel's only weakness is its politics. The Japanese went to war in 1941 because of American sanctions and the threat of an oil embargo that would have seriously compromised their military operations in China. In *Ghost Fleet* the war is precipitated by a gas discovery near the Mariana Trench which allows the Chinese to act without fear of American sanctions. In World War Two the Japanese went to war because they felt they had to; in the Singer-Cole vision of the future, the Chinese go to war because they can.

But why should a Chinese attack be any more of a gamble than the Japanese? As Clive James reminds us, Admiral Yamamoto was not only a successful gambler in private life but also something of a poet. The combination was fatal. "Yamamoto's plan for deciding the war on the first day was not only the equivalent of a roulette player betting his whole bundle on a single number, it was also the equivalent of trying to cram the whole of *The Tale of Genji* into a single *haiku"*. The same logic would surely apply to a Chinese surprise attack, even more so given the environmental catastrophe that even a limited war in space would probably produce, let alone the economic damage that would follow

from a war in cyberspace. But then, perhaps this is all beside the point. In the high-tech world of tomorrow that the authors describe so well speed and surprise will be at a premium. In such a future will there be any role for politics at all?

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