



SMALL WARS JOURNAL

smallwarsjournal.com

Speculative Fiction and National Security

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The counterinsurgency (COIN) canon—read by NATO’s top officials—includes writing from illustrious military minds such as David Galula, T.E. Lawrence, and David Kilcullen. But according to Andrew Exum, a former Army Ranger who operates the military blog “Abu Muqawama,” it might also have room for George Lucas as well. Exum recently ignited a rambunctious discussion in the political blogosphere by posting an email from his cousin, a Marine Corps officer in Afghanistan, concerning a rather unorthodox topic in defense affairs: the strategy of *Star Wars*. Exum’s cousin asked a simple question: why did the Rebel Alliance in *Star Wars* fight as a conventional force, rather than an insurgency? ¹

While the *Star Wars*-themed post provides an example of Exum’s often freewheeling and snarky style, he and his curious cousin are by no means alone in the defense community. There are many closet sci-fi fans in the military and especially within the civilian policy wonk world. Moreover, science fiction writers use the creative process to imagine future warfare, and military theorists’ predictions of future warfare often resemble science fiction.

History will always be the most useful source of quality defense analysis. The chief danger of deep futurism, fictional or not, is that it often neglects history and extrapolates present conditions to the future. At worst, speculation can tie us to one powerful (and often times erroneous) image of the future. However, speculative fiction paired with the study of history and present experience can enable creative rethinking of present conditions in an allegorical context, getting around self-imposed conceptual barriers.

These Aren’t the Drones You Are Looking For

Survival is the most basic and compelling of human activities. It is not surprising that war is one of science fiction’s major subjects. The predictive record of speculative accounts of future conflict is notoriously mixed, as for every prescient prediction one can find at least a hundred dismal failures. It is difficult not to conclude that the ancient Roman practice of examining the entrails of sacrificed animals for omens gives greater possibility of accuracy when thinking about the future.

¹ Andrew Exum, “Han Solo Was No Vo Ngyuen Gap,” *Abu Muquwama*, August 31, 2009. <http://cnas.org/blogs/abumuqawama/2009/08/han-solo-was-no-vo-nguyen-giap.html>

Reviewing past fictional depictions of future warfare reveals three broad tendencies among science fiction writers--grasping broad outlines of social change, the “legacy” extrapolation of present conditions to the far future, and complete inaccuracy designed primarily for aesthetic effect. The first tendency is exceedingly rare and often useless to immediate analysis, although it is interesting for historical purposes. The second and third comprise most of science fiction.

In his study on pre-World War I military futurism, Antulio Echevarria found that theorists like HG Wells often grasped broad changes—although many features of conflict they predicted would not appear for a half-century or more.² For example, in Jules Verne’s 1870 novel *Twenty Thousand Leagues Under the Sea*, Captain Nemo of the *Nautilus* traveled the seas in a submarine, walked the ocean floor in diving suits, and even attacked surface vessels while submerged. The navies of the world used diving suits and submarines to great effect during the First World War, and discussions of Chinese “anti-access” capabilities indicate that submarines are still crucial to maritime strategy. The first nuclear-powered submarine, and the first vessel to travel under the North Pole, was fittingly named the *USS Nautilus*.

Not all technological shifts in future warfare grasped by science fiction authors have been as momentous as the submarine. The communications technology of *Star Trek*—primarily the hand-held communicators—can be seen as a precursor to today’s cell phones, even down to the flip-fold. As P.W. Singer argues in *Wired for War*, drones and battlefield reconnaissance robots were also foreseen by hosts of science fiction writers too numerous to mention.³ More happily, the use of robotic prosthetics in *Star Wars* also prefigured advances in prosthetic limbs for disabled veterans, making Luke Skywalker’s fake hand an eventual possibility.⁴

Science fiction and futurism inevitably create what professional futurist Jamais Cascio dubs “legacy futures.”⁵ Legacy futures are old or debunked conceptions of the future that act as a drag on the imagination and policy process. As Cascio notes, “Legacy futures are rarely still useful, but have so thoroughly colonized our minds that even new scenarios and futures models may end up making explicit or implicit references to them.”⁶ Science fiction is full of legacy futures, especially when films extrapolate past or present technologies into the future. When talking about the strike on the Death Star, Wedge Antilles argues that hitting the two-meter wide exhaust port is “impossible, even for a computer.” Nevertheless, today’s precision-guided bombs require a GPS receiver to hit their target, not the Force.

Another example of present-day extrapolation can be found in the Rebel X-Wing fighter—with its wingtip-mounted weapons, Hands On Throttle-And-Stick (HOTAS)-style flight controls, sleek profile and bubble canopy—looks as if it is a mere modified copy of American jet fighters

² Antulio Echevarria, *Imagining Future War: The West's Technological Revolution and Visions of Wars to Come, 1880-1914*, Westport: Praeger, 2007. p. xv.

³ See P.W. Singer, *Wired for War: The Robotics Revolution and Conflict in the 21st Century*, New York: Penguin, 2009.

⁴ For an example of recent prosthetics developments, see Mikell Taylor, “Boston Startup iWalk Lands Funding for Robotic Prosthetics,” *IEEE Spectrum*, September 1, 2009. <http://www.spectrum.ieee.org/blog/robotics/robotics-software/automaton/boston-startup-iwalk-lands-funding-for-robotic-prosthetics>

⁵ Jamais Cascio, “Legacy Futures,” *Open the Future*, December 8, 2008. http://openthefuture.com/2008/12/legacy_futures.html

⁶ Ibid.

designed in the late 20th century. Similarly, clone troops ride into battle (during *Attack of the Clones* and *Revenge of the Sith*) on gunships which are visually nearly direct copies of 20th century rotary-wing aircraft--most notably the Mi-24 Hind helicopter and the CH-54 Tarhe helicopters. While Lucas has never commented on the linkage between his movies and the Vietnam war, there are also echoes of the conflict in *Return of the Jedi*'s forest guerrilla battle between the primitive Ewoks and the high-tech Imperial forces. Moreover, the first *Star Wars* movie's pre-flight briefing also has laughably primitive Atari-style graphics that make even the much-loathed PowerPoint look sophisticated in comparison.

Legacy futures are not solely rooted in extrapolation of present-day technologies to the future. Science fiction writers reach into the past for aesthetic effect--sometimes shockingly far back. Oddly anachronistic World War II analogies are particularly prevalent in space operas. For example, a number of scenes in *Star Wars Episode IV* are extremely similar to the climax of a movie called *The Dam Busters*, featuring British Lancaster pilots maneuvering down a river valley in order to drop bouncing bombs onto a series of dams, harassed all the while by tracer fire and Messerschmitt fighters.

Perhaps the oddest example of the "return to the future" tendency is the lightsaber, which is as grossly impractical as the cavalry saber. Equally curious is the tendency for starships in many sci-fi epics to attack while they are within visual range, despite the vast improvements that have been made in beyond visual-range weapons technology in the 20th century. In extreme cases such as the *Star Wars* prequel *Revenge of the Sith*, capital ships exchange broadsides as if they were at the Battle of Trafalgar. Admiral Ackbar has more in common with Horatio Hornblower than Chester W. Nimitz.

It would be remiss to omit that science fiction often reflects on political and social problems of the present. *Star Trek*, produced during the Cold War, makes liberal use of Cold War analogies, with the Federation representing the North Atlantic Treaty Organization (NATO) countries and the Klingon Empire portraying the Soviet Union. In one episode of the original *Star Trek*, "A Private Little War", Captain Kirk and Dr. McCoy discover that the Klingons are secretly arming a primitive tribe with weapons in the hopes of creating a proxy state. At the end of the episode, Kirk draws an analogy to what he refers to as the "Brush Wars" of the 1960s--the Vietnam War and numerous other Third World proxy wars--and concludes that the Federation must equip a rival tribe in order to maintain the balance of power on the planet. When the real Cold War ended, the producers decided to end the Federation-Klingon Cold War in *Star Trek VI*. The Klingon empire crumbled in the wake of a massive environmental catastrophe that almost explicitly parallels the Chernobyl incident.

The recent 2005 re-boot of *Battlestar Galactica* explores many of the moral and strategic issues involved with what was formerly known as the War on Terror. Issues such as torture, terror, insurgency, and religious fanaticism are explored without the equivocation and partisan political posturing that often characterizes Hollywood films made about Iraq, Afghanistan, and counterterrorism. Many political observers noted eerie echoes of counterinsurgency issues in *BSG*'s third season, which focuses on an alien occupation of the human colony New Caprica. Human colonials hide arms caches in holy shrines, use suicide bombing to kill graduates of a special human police force trained by the occupation force, and many humans are executed for

“collaborating” in ad-hoc military tribunals. While *BSG* is obviously set in a future world, it is impossible not to see echoes of Iraq and Afghanistan. But *BSG* explores these issues in a morally complex manner that has earned the show fervent fans among political wonks of all ideological stripes.

It is very clear that science fiction has been influenced by military practice, but does the influence flow the other way? It is difficult to establish any kind of direct influence on military theory from speculative fiction. Technology, sociology, political theory, and economics tend to be the sources of most attempts at military futurism. However, as Israeli military historian Azar Gat observed in his study of interwar military thought, military theory also sometimes unintentionally imitates art.⁷ The science fiction writer William Gibson’s work, for example, permeates much of military theory concerning information warfare. When cyberwarfare experts write about command and control warfare, information manipulation, and hacker gangs, it is impossible not to think of the numerous cyberpunk novels written by the man who coined the term “cyberspace.” In his taxonomy of cyber warfare, cybersecurity expert Martin Libicki even has a special category called “Gibson Warfare.”⁸

Additionally, many military theories that use the decline of the state and the rise of non-state actors as their starting point seem suspiciously like future dystopias seen in *Mad Max* and *Blade Runner*. Post-apocalyptic or dystopian science fiction epics often feature a decline of central authority, cultural hybridity, increased prominence of sub-state forces, and new spins on “traditional” modes of authority such as tribes and clans. Such comparisons probably will not surprise critics who already deride theories of future warfare as little more than science fiction. Whatever the merits of the “decline of the state” thesis, the critics have a point: bad futurism and bad sci-fi stem from the same intellectual causes.

Absolute prediction is impossible, and thinking about broad trends is often dangerous due to the dangers of extrapolating too much into the future. For example, William Gibson’s 80’s novels extrapolated Japanese economic and cultural dominance into the far future, but corporate-political zaibatsu clans are marginal in today’s world. In fact, Japan spent most of the decade immediately following Gibson’s major works in an economic slump. Similarly, 90’s visions of information dominance aged rather poorly. Hardly a week goes by without a ritual denunciation of basic Revolution in Military Affairs (RMA) concepts in military analysis and written doctrine. One might say that these concepts are the military equivalent of the *Jetsons* aesthetic.

Fighting for the Future

Detailed studies in military history and theory must remain the primary source of strategic insight for defense policymakers. Speculation, at times, can torture history to generate evidence for conclusions. Yet speculative fiction, when used as a kind of blank canvas to reflect on present events, can often reveal truths that are obscured in policy debate. Moreover, when it is paired

⁷ See Azar Gat, *A History of Military Thought: From the Enlightenment to the Cold War*. Oxford: Oxford University Press. 2002.

⁸ See Martin Libicki, *What Is Information Warfare?*, Washington, D.C.: National Defense University, 1995. http://www.ndu.edu/inss/books/Books%20-%201990%20to%201995/What_is_IW_Aug_95/a003cont.html

with history and political science it can be a powerful tool for examining the possibilities of the past and present.

For example, military theorists and policy wonks writing about grand strategy sometimes act as if complex grand strategies remain immaculate and immutable even over large amounts of time. However, as Helmuth von Moltke the Elder famously wrote, strategy is a “system of expedients” that cannot be executed in a mechanical fashion.⁹ Isaac Asimov’s *The Foundation* series illustrates this truth with its powerful depiction of scientists struggling to preserve the legacy of master planner Hari Seldon’s grand strategic plan to preserve humanity’s legacy. Like the often monolithically presented Cold War strategy of containment, Seldon’s grand plan faces severe difficulties in implementation and his successors are forced to deal with numerous crises and contingencies.

Of course, there is nothing in *The Foundation* that couldn’t also be gleaned from the study of history. Unfortunately, in practice many lack the power of imagination to contextualize the past with the present. Some defense thinkers can pick up books written by eminent defense thinkers such as Ardant du Picq, Ferdinand Foch, and Maurice de Saxe and put themselves on the battlefields of old, but many more put the likes of du Picq and Foch in the dustbin. Political and institutional biases can also act as a barrier to analysis, and legacy futures can exercise an insidious mental hold on thinking about present conflict as well as doctrine and preparation.¹⁰

Having a blank canvas that can be used to explore the present and its possibilities, when combined with other methods of political analysis and historical study, can help get around self-imposed conceptual barriers to creative thought about defense affairs. When compared to historian John Lewis Gaddis’s accounts of the Cold War and the more recent appraisal by Odd Arne Westad, Cold War-era science fiction such as *The Foundation* can be employed to think critically about whether or not containment was, as popularly believed, destined to succeed.¹¹ *Starship Troopers*, a perennial military favorite, also becomes vastly more interesting when paired with Lt. Gen John J. Tolson’s monograph about airmobility tactics in Vietnam.¹² And the aforementioned sci-fi series *Battlestar Galactica*’s examination of insurgency, terrorism, and religious violence provides an excellent fictional counterpoint to the volumes of often mutually contradictory op-eds, books, and studies published on present conflict.

There is a stereotype of Generals always fighting the last war. This isn’t necessarily true—even the stodgiest and most conservative defense thinkers move beyond the last war. Rather, the problem lies with how the defense establishment deals with the present. Seeing, contextualizing,

⁹ See Bradley J. Meyer, “The Operational Art: The Elder Moltke’s Campaign Plan for the Franco-Prussian War,” in B.J.C McKercher and Michael A. Hennessy, *The Operational Art: Developments in the Theories of War*, London: Praeger, 1995. pp. 29-51.

¹⁰ See Captain Crispin Burke, “Sorry, Pentathlete Wasn’t On the Syllabus,” *Small Wars Journal*, January 24, 2009 <http://smallwarsjournal.com/blog/2009/01/sorry-pentathlete-wasnt-on-the/>

¹¹ See John Lewis Gaddis, *Strategies of Containment: A Critical Appraisal of American National Security Policy during the Cold War*, Oxford: Oxford University Press, 2005, and O.A. Westad, *The Global Cold War: Third World Interventions and the Making of Our Times*, Cambridge: Cambridge University Press, 2007.

¹² See Lt. Gen John J. Tolson, *Airmobility 1961-1971*, Washington: D.C.: Department of the Army, 1989. <http://www.history.army.mil/books/Vietnam/Airmobility/airmobility-fm.html>

and sometimes accepting what is in front of you is one of the most basic—and difficult—human tasks. Visualizing the present is more important than predicting a future that may or may come to pass. Speculative fiction, despite its namesake, cannot help us predict the future. But it can help clarify the problems of the present—a task that is worth more than a thousand crystal balls.

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