ISSUE 99

# STRATEGIKA

Conflicts Of The Past As Lessons For The Present

JULY 2025

# TODAY'S SOLDIER AND THE CURRENT MILITARY REVOLUTION

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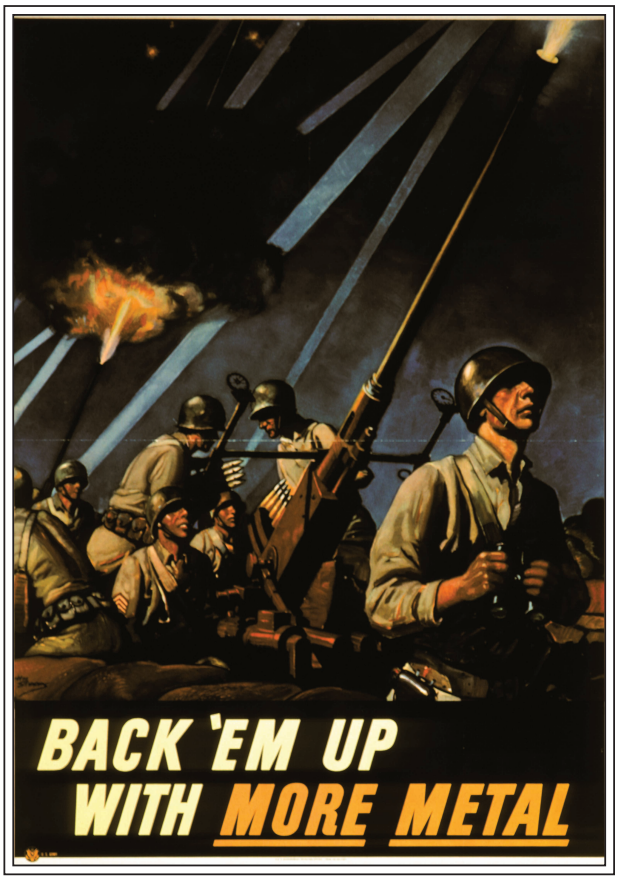
## ABOUT THE POSTERS IN THIS ISSUE

Documenting the wartime viewpoints and diverse political sentiments of the twentieth century, the Hoover Institution Library & Archives Poster Collection has more than one hundred thousand posters from around the world and continues to grow. Thirty-three thousand are available online. Posters from the United States, the United Kingdom, Germany, Russia/Soviet Union, and France predominate, though posters from more than eighty countries are included.

# The Impact of the Latest Military Technologies on Soldiers in a Potential U.S.-China Confrontation

By Miles Maochun Yu

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As China and the United States continue to advance in military technology, the nature of combat for their soldiers is changing at an unprecedented pace. A future confrontation between these two global powers would not resemble past wars fought with traditional infantry tactics and conventional firepower. Instead, it would be shaped by artificial intelligence, drone warfare, cyber operations, and next-generation battlefield systems that would redefine the roles of individual soldiers. While both nations are integrating cutting-edge technologies into their armed forces, the way these developments affect their troops will differ due to variations in military doctrine, strategic priorities, and technological capabilities.

For U.S. soldiers, battlefield operations will increasingly depend on artificial intelligence enhanced decision-making, autonomous support systems, and networked warfare. The U.S. military has invested heavily in programs like the Joint All-Domain Command and Control (JADC2), a system designed to link every soldier, drone, aircraft, and naval vessel into a single real-time information-sharing network. This means that American troops will operate with an unprecedented level of situational awareness, with AI systems continuously analyzing battlefield conditions and providing strategic recommendations. Augmented reality (AR) visors integrated into helmets will allow soldiers to see real-time drone feeds, enemy positions, and suggested maneuvers, drastically reducing the time required for decision-making. However, this increased reliance on digital infrastructure also presents vulnerabilities. In a conflict with China, U.S. troops would likely face sophisticated cyberattacks aimed at disrupting these battlefield networks, forcing them to operate in contested electronic environments where their communications could be jammed or manipulated.

In terms of personal weaponry, U.S. soldiers will be equipped with next-generation firearms featuring AI-assisted targeting and smart ammunition capable of adjusting trajectory mid-flight. Precision-guided weapons, such as computer-enhanced sniper rifles and electromagnetic railguns, will allow soldiers to engage enemies with extreme accuracy at long distances. At the same time, U.S. troops will deploy handheld directed-energy weapons and electromagnetic pulse (EMP) devices to counter China's growing reliance on AI-driven drone swarms. Robotics will also play a crucial role, with autonomous ground vehicles acting as battlefield

assistants—carrying supplies, providing cover fire, and evacuating wounded personnel. Additionally, exoskeleton technology is being developed to enhance soldier endurance and strength, allowing for greater mobility and sustained combat effectiveness.

On the other side, Chinese soldiers will experience a technological transformation that aligns with the People's Liberation Army's (PLA) doctrine of "intelligentized warfare." Unlike the U.S. approach, which focuses on integrating AI into human decision-making, China is pushing toward a more autonomous model where AI-driven drones and robotic systems take on an increasingly direct combat role. The PLA has invested heavily in drone swarm technology, designed to overwhelm enemy forces with vast numbers of AI-controlled UAVs operating in coordinated formations. Chinese infantry units will be supported by robotic squads, autonomous artillery systems, and self-driving tanks that require minimal human oversight. This means that in a future conflict, Chinese soldiers may act more as battlefield coordinators, directing robotic assets rather than engaging in traditional frontline combat.

Chinese soldiers will also benefit from AI-driven battlefield analysis tools that can predict enemy movements, optimize attack strategies, and provide real-time intelligence through augmented reality interfaces. Like their American counterparts, they will use AR-equipped helmets, but their system will be more centralized, with AI algorithms in command centers dictating tactical decisions. The PLA's emphasis on cyber warfare will also affect how Chinese soldiers operate. They will likely be trained to exploit enemy electronic systems, using cyber-enabled deception tactics to disrupt U.S. battlefield networks and electronic infrastructure. This focus on cyber warfare may allow China to neutralize U.S. technological advantages, forcing American troops to operate under degraded conditions where AI assistance and digital reconnaissance tools become unreliable.

The biggest difference between U.S. and Chinese soldiers in a future war will be the level of autonomy given to AI in combat decision-making. While American forces will integrate AI as an assistive tool, the PLA's doctrine suggests a higher degree of reliance on AI to conduct autonomous operations, potentially reducing the role of human soldiers in direct combat. This could make China's forces more effective in swarm tactics and coordinated strikes but may also introduce unpredictability if AI-driven systems make errors or become compromised.

Another key contrast lies in logistics and battlefield sustainability. The U.S. military is working toward making its infantry forces more self-sufficient by incorporating AI-managed supply chains, autonomous resupply drones, and robotic medics. This could allow American soldiers to maintain prolonged operations without relying on traditional supply routes, reducing their logistical vulnerabilities. In contrast, China's approach leans toward rapid, overwhelming force projection using AI-coordinated mass mobilization. The PLA is likely to deploy soldiers in a highly mechanized environment where large-scale drone warfare, hypersonic missile support, and electronic warfare units create a battlefield where speed and information dominance dictate outcomes.

Both nations are equipping their soldiers with high-tech personal protection, including adaptive body armor that can absorb high-velocity impacts and reduce heat signatures to counter AI-driven targeting systems. However, as AI-driven targeting improves, simply wearing advanced armor will not guarantee survival. Soldiers on both sides will need to rely on electronic countermeasures, stealth tactics, and AI-driven deception strategies to evade detection by enemy drones and automated weapons.

Ultimately, while U.S. and Chinese soldiers will both experience a battlefield where machines play an increasingly central role, their experiences will differ based on their respective military doctrines. U.S. soldiers will act as technologically enhanced warriors, operating in a highly connected battlefield where AI serves as an advisor but not the final decision-maker. In contrast, Chinese soldiers will likely serve as AI-enabled coordinators, directing large-scale robotic and drone forces where AI takes on a more autonomous role in executing battlefield operations. This fundamental difference could determine how a U.S.-China conflict unfolds, with

the U.S. prioritizing human-machine collaboration and China leveraging AI-driven automation and overwhelming force projection. Regardless of who prevails, the warfighter of the future will be fundamentally different from those of the past, operating in a combat environment where AI, robotics, and cyber warfare redefine the nature of military engagement.

**Miles Maochun Yu** is the Robert Alexander Mercer Visiting Fellow at the Hoover Institution. He served in the first Trump administration as the principal China policy and planning advisor to Secretary of State Mike Pompeo. Since 1994, he has been a professor of modern China and military history at the United States Naval Academy in Annapolis, Maryland. Concurrently he serves as a leader in major wargame series conducted by several U.S. combatant commands and service branches, including the U.S. Navy (Pacific Fleet), the U.S. Army (U.S. Army Pacific), Special Operations Command (SOCOM), and U.S. Marine Corps Special Operations Command (MARSOC). He also serves as special advisor on China to several other government agencies and offices. His books include *OSS in China: Prelude to Cold War* (Yale University Press, 1997) and *The Dragon's War: Allied Operations and the Fate of China, 1937–1947* (Naval Institute Press, 2006). He is the author of many newspaper columns and scholarly articles on China and military and intelligence history. He currently writes a biweekly "Red Horizon" column for *The Washington Times*, where he was also the columnist for "Inside China" (English, 2012–18), and for the Taipei Times (English, 2020–24). For over two decades (1996–2018) he was the host of a satire column and a political commentary column (Chinese) for Radio Free Asia, each with a large Chinese following. His numerous awards include the U.S. Naval Academy's top researcher award, a U.S. Navy Special Action Award, and a U.S. Navy Meritorious Service Award. He received a doctorate in history from the University of California, Berkeley, a master's degree from Swarthmore College, and a bachelor's degree from Nankai University.

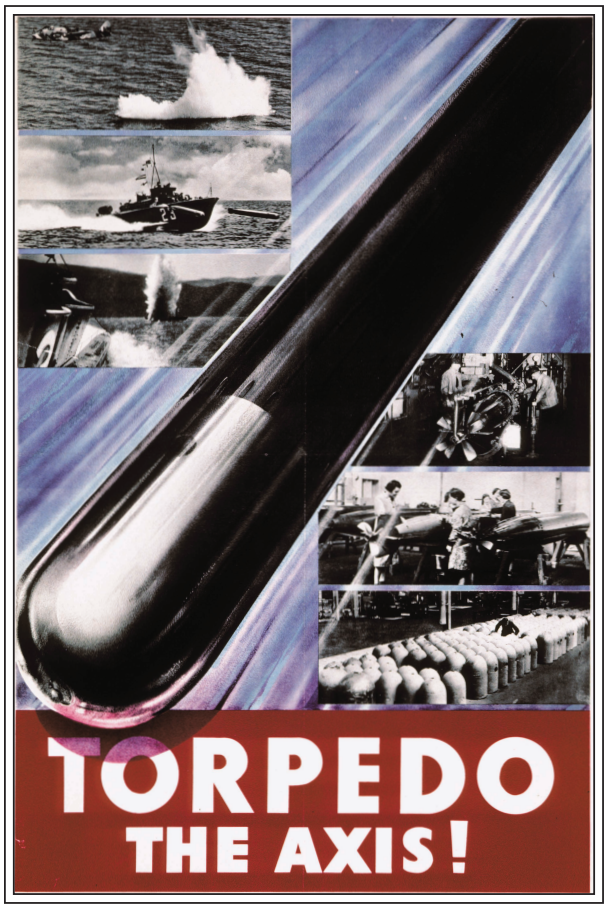



Image credit: Poster Collection, 03712, Hoover Institution Archives.

# Challenge and Response in War

## By Andrew Roberts

Every military revolution in arms has always forced soldiers to re-equip themselves, usually by bulking up as well as wising up. This latest revolution will be no different, except insofar as the pace of change has been advancing exponentially, as thus so must be the responses. Slingshots, "Greek fire," stirrups, war chariots, battle elephants, gunpowder, germ warfare, Dreadnoughts, machine guns, the tank, fighter aircraft, satellite technology, nuclear bombs: every single advance in military technology has given its inventors a massive initial advantage on the battlefield; the last even ended World War Two.

Yet each of those advantages was only temporary, while the inventors' opponents learnt how to copy, adapt, and respond. The Soviet Union tested its own Bomb less than four years after Nagasaki.

In almost all cases of military innovation, the average soldier had to be issued with more and more kit in order to fight against the new weaponry. Sometimes this was relatively easy to do: the response to stirrups was to introduce them for all cavalry immediately, gas was countered by gas masks, and so on. By the time of the Second World War, an infantryman could be expected to have (and in some cases carry) over sixty pounds of equipment, a heavier load even than his Napoleonic Wars era counterpart, who had to carry a Brown Bess musket weighing over ten pounds, plus lead ammunition and a 17" bayonet.

In previous campaigns, high commands tended to have time to adapt and respond. The Allies adopted Napoleon's Corps system within a few years of his invention of it; the Germans deployed tanks on the Western Front of World War One in March 1918, eighteen months after they had first been used by the Allies at Flers-Courcelette in the Battle of the Somme in September 1916. Time will not be on the side of future armies, however, because of the sheer sophistication of the new military technologies that are currently under research, development, and production, and might shortly be deployed.

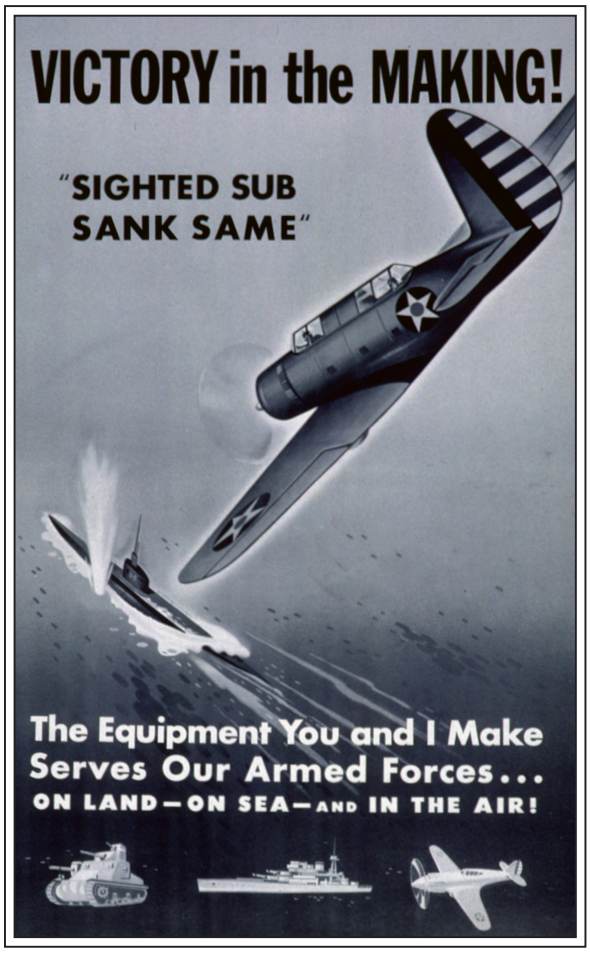
From what we can glean from the Russo-Ukrainian war, the current military revolution, particularly in drone technology, robotics, AI, Starlink and other space-based systems, battlefield sensors, IEDs, and electronic jamming and denying techniques, will require the average soldier to be far better conversed in areas of technological expertise than any of his historical predecessors. His Kevlar body armor (or its updated, thinner, but equally bullet-resistant successor) is going to have to be much more advanced too.

Should the next war take place in outer space, as opposed to cyberspace or ground battlefield space, there will be next to nothing that the average soldier will be able to do to affect its outcome, however well protected he is and advanced his education. If one side—presumably the Sino-Russian-Iranian-North Korean Axis—were to launch a surprise attack that successfully knocked out Western satellites, especially if it took

place with a simultaneous cutting of key undersea communications cables, the West would be forced to fight essentially analogue military engagements, using physical maps against an enemy with GPS.

I have already mentioned the Battle of the Somme, but at least then the losses were on both sides. If the Axis with satellites attacked the Western Allies without them, the losses would be incalculable, and almost all on one side.

**Andrew Roberts** is the Bonnie and Tom McCloskey Distinguished Visiting Fellow at the Hoover Institution. Lord Roberts took a first in modern history and earned his PhD at Gonville and Caius College, Cambridge, where he is an Honorary Senior Scholar. His biography of Winston Churchill's foreign secretary Lord Halifax, *The Holy Fox*, was published in 1991 and was followed by *Eminent Churchillians*; *Salisbury: Victorian Titan* (which won the Wolfson Prize for History and the James Stern Silver Pen Award for Non-Fiction); *Napoleon and Wellington*; *Hitler and Churchill: Secrets of Leadership*; *Waterloo: Napoleon's Last Gamble*; *A History of the English-Speaking Peoples Since 1900* (which won the Intercollegiate Studies Institute Paolucci Book Award); and *Masters and Commanders: How Four Titans Won the War in the West, 1941–45*, which was shortlisted for the Duke of Westminster's Gold Medal and the British Army Military Book of the Year award. Lord Roberts is a fellow of the Royal Society of Literature and of the Royal Historical Society; an honorary Doctor of Humane Literature; a Trustee of the Margaret Thatcher Archive Trust and of the National Portrait Gallery; chairman of the Guggenheim-Lehrman Military Book Prize; the Lehrman Institute Distinguished Fellow at the New York Historical Society; and a visiting professor of the War Studies Department of King's College, London. He reviews history books for over a dozen newspapers and periodicals. His website can be found at andrew-roberts.net. In November 2022, Andrew Roberts was elevated to the House of Lords as Lord Roberts of Belgravia.

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# Turkey, Hard Power Politics, and Drones

By Soner Cagaptay

Turkey's foreign policy under President Recep Tayyip Erdogan has gone through a number of turns since 2003, characterized by the country's leader continuously taking stock of domestic and global dynamics whilst navigating between the U.S. and Europe, Russia, Eurasia, and the Middle East.

After coming to power in 2003, Erdogan followed an internationalist foreign policy for nearly a decade, maintaining Ankara's traditionally good ties with Europe, the U.S., and Israel at the time. With Turkey's European Union (EU) accession process coming to the de-facto end—with Arab uprisings starting next door in the Middle East—Erdogan switched to a pro-Muslim Brotherhood foreign policy in 2010–11. Turkey's ties with the West frayed in this era.

However, the failures of the Brotherhood regionally, coupled with successive economic crises in 2018 and 2020, led Erdogan to pivot—once more—almost a decade later.

Since then, Turkey's foreign policy has become transactional in nature, driven by a middle-power identity, and shaped by hard power politics, including Ankara's famed drones.

Deserving special analysis under this rubric—and lying at the core of Ankara's hard power approach to international relations—is Turkey's drone program. This program was essentially born of frustration, in a sense. Having purchased from Israel drones with limited capability in the late 1990s, Turkey was later rebuffed in efforts to purchase more advanced American drones.

Accordingly, Ankara turned to its own resources. Turkish Aerospace Industries (TAI), a government-owned enterprise, developed a domestic prototype, the ANKA, which struggled to achieve operational capability in 2010–12, but provided adequate reconnaissance capabilities by 2016. A domestic breakthrough came from the privately owned Baykar firm, whose scion Selcuk Bayraktar, one of Erdogan's sons-in-law, designed and demonstrated a small drone in 2005, won a contract for 19 mini-drones the following year, and won a mass production contract for the TB2 model in 2012, finally achieving precision strike capability with the latter by 2015. The Turkish military was employing dozens of TB2s and ANKAs between 2015 and 2017, and began exporting them in droves by early 2017.

By 2020, those drones enabled Turkey to outmaneuver Russia and other powers as a shaper of events on the ground in multiple regional conflicts, such as in Syria, Libya, and the South Caucasus. This approach also enabled Turkey by 2020 to significantly decrease Kurdistan Workers Party (PKK) operations on its territory, and to inflict increasing casualties against PKK fighters and leadership in Iraq and Syria. Most recently, Turkish-made drones have been cited by Ukrainian leaders as a critical tool against the Russian invasion,

memorialized even in a patriotic song called "Bayraktar" that was shared on the Ukrainian army's official Facebook page in early March 2022.

Turkish drones have their limitations, however. As stand-alone systems, current systems—the pioneering ANKA, the flagship TB2, and the Kargu "Kamikaze Drone"—are of middling quality compared to U.S. drones.

However, Turkey's systems are still desired globally. Take, for instance, the TB2, which is "utilitarian and reliable—qualities reminiscent of the Soviet Kalashnikov AK-47 rifle that changed warfare in the twentieth century. A set of six Bayraktar TB2 drones, ground units, and other essential operations equipment costs tens of millions of dollars, rather than hundreds of millions for the [U.S.-made] MQ-9," as a June 2021 *Wall Street Journal* article put it.

In fact, and taking the big picture view, the drones embody today's Turkey—a middle-income economy and a middle-power that often falls in the middle of global indicators: Turkey's drones are not super high-tech, but they are affordable and they get the work done. This also means they are available to other middle-power, and other middle-power-aspirant, nations.

In 2017, Ankara began exporting the TB2, and within five years it had sold drones to nearly two dozen countries, including allies and partners in Europe (Albania, Poland, and Ukraine); Central and South Asia (Kyrgyzstan, Pakistan, and Turkmenistan); Africa (Ethiopia, Libya, Morocco, Somalia, and Tunisia); the Gulf and the Levant (Qatar, Iraq); and the Caucasus (Azerbaijan, considered by Ankara to be its closest ally). Although these arms deals have been driven by a combination of mercantilism and geopolitics, they have almost always involved countries in which Turkey has a strategic interest. For now, the drones have provided Ankara with a network of allies across Eurasia, Africa, and the Middle East.

## POLL: How will the current military revolution in arms and tactics change the average soldier himself—in terms of defensive protection, offensive weaponry, communications, and robotics and drones?

- ☐ There will be few changes, given the essence of war is unchanging human nature.
- ☐ We will see a historic decline in the forward line of troops as the battlespace will become the work of drones and robots.
- ☐ We are on the cusp of a historic return to the primacy of defense as individual soldiers will be better protected and enhanced by robotics.
- ☐ There will be greater targeting of rear echelon robot/drone operators and civilians who facilitate them.
- ☐ Much of the new war will be robot-to-robot/drone-to-drone, thereby lessening human casualties.

However, this "drone diplomacy" is not without limitations. As noted above, since 2017 Turkish producers have sold drones to nearly two dozen customers across a broad geographical area. The image of a drone-empowered revisionist Turkey upsetting regional balances has incentivized rivals—namely Greece, Egypt, Israel, the UAE, Cyprus, and France—to form an informal alliance to push back on Turkey around the East Mediterranean.

What is more, Turkey's drone sales often come with no end-user agreements, creating problems. For instance, in 2002 Ethiopia came under the spotlight for causing civilian casualties with its Turkish-built drones, although the drones were credited with ending an offensive by Tigrayan rebels.

Nevertheless, after years of go-it-alone unilateralism—which brought Turkey a growing number of regional adversaries and frayed its alliances with the United States and Europe—Ankara has been able to leverage its Bayraktars and other drones to transform its international profile.

**Soner Cagaptay** is the Beyer Family Senior Fellow and director of the Turkish Research Program at The Washington Institute. He has written extensively on U.S.-Turkish relations, Turkish domestic politics, and Turkish nationalism, publishing in scholarly journals and major international print media, including *The Wall Street Journal*, *The Washington Post*, *The New York Times*, *Foreign Affairs*, and *The Atlantic*. He has been a regular columnist for *Hürriyet Daily News*, Turkey's oldest and most influential English-language paper, and a contributor to CNN's *Global Public Square* blog. He appears regularly on Fox News, CNN, NPR, BBC, and CNN-Turk. His latest book, *A Sultan in Autumn: Erdogan Faces Turkey's Uncontainable Forces*, was published in June 2021 by I.B. Tauris. His books have been translated into Turkish, Italian, Greek, Romanian, and Croatian. A historian by training, Dr. Cagaptay wrote his doctoral dissertation at Yale University on Turkish nationalism. Dr. Cagaptay has taught courses at Yale, Princeton University, Georgetown University, and Smith College on the Middle East, the Mediterranean, and Eastern Europe. His spring 2003 course on modern Turkish history was the first offered by Yale in three decades. From 2006–7, he was Ertegun Professor at Princeton University's Department of Near Eastern Studies.

# Discussion Questions

1. Are there new breakthroughs in body armor that will enhance survivability?
2. Will cheap maritime drones restrict the operations of multi-billion-dollar aircraft carriers?
3. Will drones make artillery and tanks obsolete?
4. Will swarms of micro-drones target key command and control personnel on and off the battlefield?
5. What are the current best methods to counter drone attacks?



## IN THE NEXT ISSUE

## The Current Status of Military History

## Military History in Contemporary Conflict

As the very name of Hoover Institution attests, military history lies at the very core of our dedication to the study of "War, Revolution, and Peace." Indeed, the precise mission statement of the Hoover Institution includes the following promise: "The overall mission of this Institution is, from its records, to recall the voice of experience against the making of war, and by the study of these records and their publication, to recall man's endeavors to make and preserve peace, and to sustain for America the safeguards of the American way of life." From its origins as a library and archive, the Hoover Institution has evolved into one of the foremost research centers in the world for policy formation and pragmatic analysis. It is with this tradition in mind, that the "Working Group on the Role of Military History in Contemporary Conflict" has set its agenda—reaffirming the Hoover Institution's dedication to historical research in light of contemporary challenges, and in particular, reinvigorating the national study of military history as an asset to foster and enhance our national security. By bringing together a diverse group of distinguished military historians, security analysts, and military veterans and practitioners, the working group seeks to examine the conflicts of the past as critical lessons for the present.

## Working Group on the Role of Military History in Contemporary Conflict

The Working Group on the Role of Military History in Contemporary Conflict examines how knowledge of past military operations can influence contemporary public policy decisions concerning current conflicts. The careful study of military history offers a way of analyzing modern war and peace that is often underappreciated in this age of technological determinism. Yet the result leads to a more in-depth and dispassionate understanding of contemporary wars, one that explains how particular military successes and failures of the past can be often germane, sometimes misunderstood, or occasionally irrelevant in the context of the present.

## *Strategika*

*Strategika* is a journal that analyzes ongoing issues of national security in light of conflicts of the past—the efforts of the Military History Working Group of historians, analysts, and military personnel focusing on military history and contemporary conflict. Our board of scholars shares no ideological consensus other than a general acknowledgment that human nature is largely unchanging. Consequently, the study of past wars can offer us tragic guidance about present conflicts—a preferable approach to the more popular therapeutic assumption that contemporary efforts to ensure the perfectibility of mankind eventually will lead to eternal peace. New technologies, methodologies, and protocols come and go; the larger tactical and strategic assumptions that guide them remain mostly the same—a fact discernable only through the study of history.



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