JOURNAL OF ADVANCED MILITARY STUDIES

Vol. 15, No. 2, 2024

N34IHK

THE REAL

III III I BO

1.1

JOURNAL OF ADVANCED MILITARY STUDIES

JANS



Published by Marine Corps University Press 2044 Broadway Street | Quantico, VA 22134 MARINE CORPS UNIVERSITY BGen Matthew Tracy, USMC President

Col Mark R. Reid, USMC Chief of Staff

SgtMaj Stephen J. Lutz, USMC Sergeant Major of MCU

EDITORIAL STAFF Ms. Angela J. Anderson Director, MCU Press

Mr. Jason Gosnell Managing Editor/Deputy Director

Ms. Stephani L. Miller Manuscript Editor

Mr. Christopher N. Blaker Manuscript Editor

ADVISORY BOARD Dr. Rebecca J. Johnson

Provost Marine Corps University

Col Christopher Woodbridge, USMC (Ret)

Editor, Marine Corps Gazette

Col Jon Sachrison, USMC (Ret) COO, MCU Foundation

SCHOOLHOUSE DIRECTORS Colonel Cornelius D. Hickey, USMC School of Advanced Warfare

Colonel Christopher Steele, USMC Expeditionary Warfare School

Colonel Andrew M. Kelley, USMC Marine Corps War College

Colonel Andrew R. Winthrop, USMC Command and Staff College

Journal of Advanced Military Studies (Print) ISSN 2770-2596 (Online) ISSN 2770-260X

DISCLAIMER

The views expressed in the articles and reviews in this journal are solely those of the authors. They do not necessarily reflect the opinions of the organizations for which they work, Marine Corps University, the U.S. Marine Corps, the Department of the Navy, or the U.S. government. When necessary, errata will be published immediately following the book reviews. MCUP products are published under a Creative Commons NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0) license. Established in 2008, MCU Press is an open access publisher that recognizes the importance of an open dialogue between scholars, policy makers, analysts, and military leaders and of crossing civilian-military boundaries to advance knowledge and solve problems. To that end, MCUP launched the *Journal of Advanced Military Studies* (JAMS) to provide a forum for interdisciplinary discussion of national security and international relations issues and how they have an impact on the Department of Defense, the Department of the Navy, and the U.S. Marine Corps directly and indirectly. JAMS is published biannually, with occasional special issues that highlight key topics of interest.

ARTICLE SUBMISSIONS

The editors are looking for academic articles in the areas of international relations, geopolitical issues, national security and policy, and cybersecurity. To submit an article or to learn more about our submission guidelines, please email MCU_Press@usmcu.edu.

BOOK REVIEWS

Send an email with a brief description of your interests to MCU_Press@usmcu.edu.

SUBSCRIPTIONS

Subscriptions to JAMS are free. To join our subscription list or to obtain back issues of the journal, send your mailing address to MCU_Press@ usmcu.edu.

ADDRESS CHANGE

Send address updates to MCU_Press@usmcu. edu to maintain uninterrupted delivery.

INDEXING

The journal is indexed by ProjectMUSE, Scopus, ScienceOpen, EBSCO, ProQuest, Elsevier, OCLC ArticleFirst, Defense Technical Information Center, Journal Seek, IBZ Online, British Library System, Lancaster Index to Defense and International Security Literature, and AU Library Index to Military Periodicals.

FREELY AVAILABLE AT WWW.USMCU.EDU/MCUPRESS

| Contents Vol. 15, M | |
|--|-------------------------------|
| From the Editors | 5 |
| THE EVOLUTION OF AMPHIBIOUS WARFAR | E |
| Maritime Militias: Disrupting Naval Operations in the Pacific Theater and the case for Intermediate Fo Capabilities in the Maritime Domain <i>Peter Dobias, PhD</i> | 9 orce |
| Rescuing the Unreachable: Personnel Recovery and Resupply in a Contested A2/AD Environment Captain William Fensterer, USN; Colonel Richard Marsha Commander Colleen Minihan, USN; and Lieutenant Color Jason Phillips, USA | 27 II Jr., USMC; nel |
| Land Power in the Littoral: An Australian Army Perspe John Nash, PhD | ective 40 |
| Reconnaissance-Strike Tactics, Defeat Mechanisms, and the Future of Amphibious Warfare <i>B. A. Friedman</i> | 54 |
| Bringing Clarity to Stand-in Forces: How Operational A and Science Provide the Linkage between Stand-in Fo Expeditionary Advanced Base Operations, and Recom Counterreconnaissance Operations <i>Major Pat Hassett, USMC</i> | Art 79 rces, naissance/ |
| Houthi Motivations Driving the Red Sea Crisis: Unders How Ansar Allah's Strategic Culture Goes Beyond Gaz | standing 94 a and Iran |

Jonah Carlson

3

| Oceans Are Now Battlefields: How the U.S. Navy and | 115 |
|---|-------|
| Marine Corps can Counter North Korea's Navy in an Evolvin <i>Alan Cunningham</i> | g Age |
| Fires from the Shore: Supporting the Fight for Sea Control <i>Major Shaun Callahan, USA</i> | 125 |
| China's "Second Battlefield": Political Warfare in Combat Operations <i>Kerry K. Gershaneck</i> | 145 |
| Selecting San Carlos: The Falkland War, 1982 <i>Michael T. Maus</i> | 171 |
| BOOK REVIEWS | |
| Spymaster's Prism: The Fight against Russian Aggression By Jack Devine | 195 |
| Reviewed by Jennifer Walters, PhD | |
| Escaping the Deadly Embrace: How Encirclement Causes Major Wars | 198 |
| By Andrea Bartoletti Reviewed by Anthony Marcum, PhD | |
| What It Means to Be a Man: How to Become a Better Person By Major General Bill Mullen, USMC (Ret) Reviewed by Mark R. Folse, PhD | 203 |
| The Nuclear Club: How America and the World Policed the Atom from Hiroshima to Vietnam By Jonathan R. Hunt Boviewed by William B. Batterson, BbD | 205 |
| Reviewed by William R. Fallerson, FID | |

Reconnaissance-Strike Tactics, Defeat Mechanisms, and the Future of Amphibious Warfare

B. A. Friedman

Abstract: Professional discussions of tactics tend to revolve around debates over "strategies" of maneuver versus attrition, ongoing discussions of revolutions in military affairs, and proposals for new concepts of operation. What these discussions are really about though is tactics, specifically what kind of tactics are appropriate for the modern operating environment. Active-duty practitioners have little time to think deeply about tactics due to the intense demands of training to execute doctrine, which are codified tactics that have worked in the past but may not be sufficient to adapt to changing and uncertain situations in combat. Fortunately, with a little focus on tactics we can cut through the hype as all of these ideas have been circling around the identification of the modern tactical regime: reconnaissance-strike tactics. This article first reviews the current debate about maneuver versus attrition tactics and propose that, instead, the advent the reconnaissance-strike regime demands a more sophisticated examination of tactical principles applied against defeat mechanisms. Lastly, it examines implications for amphibious warfare and the Marine Corps generally. Keywords: tactics, maneuver, attrition, reconnaissance-strike tactics, amphibious warfare

rofessional discussions of tactics tend to revolve around debates over "strategies" of maneuver versus attrition, ongoing discussions of revolutions in military affairs, and proposals for new concepts of operation. The first two have been in vogue to varying degrees since the 1990s and their

B. A. Friedman is a retired U.S. Marine Corps field artillery officer and is currently pursuing a doctorate in international relations through the University of Reading. He is the author of many works on military theory including *On Tactics: A Theory of Victory in Battle* and *On Operations: Operational Art and Military Disciplines.* https://orcid.org/0009-0008-0025-6811.

utility has degraded as there is no clear distinction between maneuver and attrition and there is little reason to doubt that a new regime has emerged and matured around precision-guided munitions. The latter has produced a cottage industry of allegedly new forms of warfare based on technology that may or not reach full operational capability and frequent descriptions of "game changers" that make extant tactics obsolete.

What is lost in discussions overly focused on technology is the fundamentals of tactics. Strategy can only ever achieve what tactics can deliver. The Russian armed forces went into the Russo-Ukrainian War with more sophisticated and updated doctrine, more advanced weaponry, a massive materiel advantage, and numerical superiority in terms of both personnel and platforms on land, in the air, and at sea. But the Ukrainians outmatched it all at every turn by outclassing the Russians tactically.

Active-duty practitioners have little time to think deeply about tactics due to the intense demands of training to execute doctrine, which are codified tactics that have worked in the past but may not be sufficient to adapt to changing and uncertain situations in combat. To understand how amphibious operations will evolve, one must first consider the tactical regime under which they will be executed. Fortunately, with a little focus on tactics one can cut through the hype as all of these ideas have been circling around the identification of the modern tactical regime: reconnaissance-strike tactics. This article will first review the current debate about maneuver versus attrition tactics and propose that, instead, the advent of the reconnaissance-strike regime demands a more sophisticated examination of tactical principles applied against defeat mechanisms. Then, it will lay out broad implications for amphibious warfare.

The False Choice: Attrition versus Maneuver

Most discussions of tactics will eventually come down to the debate between attrition warfare and maneuver warfare, such as that found in *Warfighting*, Marine Corps Doctrinal Publication 1.¹ This dichotomy, however, has led to a great deal of confusion, and theory is only useful if it enables clarity. The word maneuver implies that the concept describes the action of maneuver forces such as infantry and armor units, which was never the intent of John Boyd's conception nor of the application of it in *Warfighting*. Labeling the opposite of maneuver warfare "attrition warfare" also implied that maneuver warfare lacks attrition or is intended to defeat an opposing force without attrition, which was also never the intent. Additionally, it turned attrition into a dirty word.

Franz-Stefan Gady and Michael Kofman examined the ongoing Russo-Ukrainian War through the lenses of attrition and maneuver. However, the tactics they describe as attrition could just as well be described as maneuver. They describe Ukraine's actions like this: Broadly in line with the theory of manoeuvre warfare, the Ukrainian armed forces did seek to degrade the Russian forces' physical, mental and moral cohesion by targeting critical support systems such as command-and control nodes and supply depots. In practice, though, this was primarily accomplished by attrition and mass fires rather than by manoeuvre and precision strike. Ukrainian artillery has often operated on its own, and offensive manoeuvre has yielded mixed results against a prepared defence with a high density of forces. It is the combination of traditional fires and repeated ground assaults that set the stage for offensive Ukrainian operations.²

They stress that the intentional attrition of Russian forces facilitated later maneuver by the Ukrainian armed forces.³ So is that attrition or is it maneuver? The answer is that it is both. Using traditional fires and ground assaults to cause attrition and facilitate maneuver is perfectly in line with maneuver warfare principles and can also be considered attrition. Amos Fox has taken on the concept of maneuver more directly, arguing in the *RUSI Journal* that the technology of the reconnaissance-strike regime (described below) has rendered it "dead" because maneuver forces can be detected and targeted.⁴ But the "maneuver" in maneuver warfare does not exclusively mean the movement of forces in space but has a much broader definition. Fox also describes tactics such as flanking attacks and penetrations as "non-manoevre tactics," which does not match with other conceptions of what maneuver warfare means. What is maneuver and what is attrition are increasingly in the eye of the beholder, rendered useless by decades of misconceptions and misuses.

This is not the fault of these excellent analysts but rather the fault of the terms themselves; they are too loose and too intermingled to offer clear insights. They are not distinct enough concepts to support rigorous analysis. To be fair, there is a disclaimer in *Warfighting* that styles of warfare are a spectrum and that pure attrition and pure maneuver does not exist. While true, these two tactical theories of victory have only caused confusion. It is time to move beyond them, not just because of this confusion but because the technology and tactics of the twenty-first century open up more tactical theories of victory than these.

The Revolution in Military Affairs and Reconnaissance-Strike Tactics

The revolution in military affairs (RMA) was an idea, popular in the 1990s and early 2000s, that a major discontinuity in the character of warfare had occurred or was about to occur. This belief grew out of an examination of future trends overseen by the Office of Net Assessment (ONA) and written by Andrew Krepinevich, an effort begun in 1991. The report was later declassified and pub-

lished in 2002, just as the Global War on Terrorism pulled the Department of Defense into a focus on counterinsurgency.

Predictive analysis inevitably gets some things wrong, but the report got a lot of things right. One thing it predicted correctly was tactical trends. Few paid attention to this success though. ONA is interested in strategy by nature, and by framing the conclusions in such a way as to make them seem more strategic and revolutionary, the conclusions about where tactics were headed were obscured. The more revolutionary promises of the RMA, such as the end of "fog of war," never came to pass, but the more grounded tactical trends did. Some of the tactical conclusions presented in that paper that have since turned out to be true are:

- A greater reliance on rapidly acquiring, processing, and disseminating information, especially targeting data
- Proliferation of space-based and unmanned intelligence, surveillance, and reconnaissance (ISR) systems
- Increasing operational tempo
- The proliferation of precision-guided munitions with increasing range and lethality
- The "hider-finder" competition and the need for greater signature management
- Increasing growth and proliferation of non-kinetic capabilities such as electronic warfare and cyber warfare
- Simultaneous vice sequential operations
- A greater emphasis on firepower rather than the acquisition of territory⁵

Some other tactical conclusions, such as the increasing importance of nonline-of-sight weapons over line-of-sight weapons, are likely to be true as well. One major theme that the report emphasized and was subsequently ignored by the Department of Defense was that the potential of these tactical trends could only be exploited through organizational fusion: military units must be organized to exploit the potential of information-age technologies.⁶ Simply purchasing the technology would change little.

The Center for Strategic and Budgetary Assessments revisited the topic in 2010. This yielded another group of conclusions including increased vulnerability for both stealth and naval platforms, the growing importance of space and cyberspace, and the vulnerability of large-scale surface forces on land and sea to reconnaissance-strike complexes employing pervasive intelligence, surveillance, and reconnaissance platforms to provide the information requirements of precision-strike munitions. These conclusions have come to pass and just as it is time to move tactical theory beyond the simplistic maneuver versus attrition dichotomy. It is also time to move beyond debates about the maturation and proliferation of an RMA and examine how it can be exploited.

A maturation of the debate over the RMA is necessary to move discussion past the technological aspects of it. As Krepinevich rightly noted in the above cited report, tactical regimes are not created by technology but rather new forms of military organization that exploit it. The transition from one tactical regime to another is never marked merely by the appearance of new weapons or new capabilities, but rather by the appearance of new ways of organizing forces to exploit new weapons or capabilities. Military history knows these organizations by name: the Greek phalanx, the Roman legion, the French *chevauchee*, the Napoleonic *corps de armee*, the German panzer corps, and the Marine Air-Ground Task Force. All of these units were newly organized to combine the arms of a specific tactical regime into a singular unit for a wide array of mission sets.

Tactical Regimes

A tactical regime is characterized by the arms available to military forces, the ways in which they are combined, and the interaction between those arms and the units that employ them. For centuries, combined arms revolved around the combination of light infantry, heavy infantry, light cavalry, and heavy cavalry.⁷ Which of these arms was dominant changed over time, but the tactical regime stayed the same. Siege weaponry was too poorly developed and too logistically cumbersome and thus became a thing unto itself. After the gunpowder revolution, however, more possibilities emerged.

Line of Battle Tactics

The development of gunpowder weapons caused combined arms to revolve around infantry, cavalry, and artillery. Line of battle tactics developed where infantry forces acted in formation as a base to support and be supported by cavalry and artillery. Characterized by the need to concentrate infantry with muskets and later rifles in massed formations to effectively employ them, making tactics a matter of choosing from among a few possible formations with associated advantages and disadvantages. Infantry was supplemented by cavalry, which was best employed as a maneuver force based in the line of battle that it could use as protection. Artillery, then only available as a direct-fire weapon system, was similarly vulnerable by itself, and therefore better used in concert with infantry. Light, dispersed infantry was best employed to support the line of battle.

Naval tactics also followed the line of battle logic during this tactical regime, except that the destructive power of ships was almost wholly concentrated in the cannons a ship was able to mount. The most famous method was "crossing the T," which consisted of maneuvering the line of battle to a position perpendicular to the opponent's line of battle, enabling the massing of fires on one point while preventing the opponent from massing fires at all.

Armor-Infiltration Tactics

The technology of small arms continually developed until line of battle tactics froze in 1914, necessitating the emergence of new tactical regime to overcome them. The author has termed this *armor-infiltration tactics* in line with the development of storm or penetration tactics later in World War I.⁸

The advent of armor on both land and sea was one factor that ended line of battle tactics. Infantry, highly vulnerable to armor, indirect-fire artillery, close air support, and machine guns, was best used to exploit the actions of armor forces, which could more easily contend with those threats. Line of battle tactics only remained relevant in the defense where fortifications could be used as protection. In the offense, infantry forces developed infantry infiltration tactics to mitigate the effects of machine guns and indirect fire artillery. Aircraft largely took over the functions of cavalry: reconnaissance, screening, and striking targets of opportunity.

Armored battleships dominated the sea during this regime, although the aircraft augmented them in much the same way that cavalry augmented the line of battle and aircraft augmented armored forces: through reconnaissance, screening, and, where possible, striking. Crossing the T, successfully used by the Imperial Japanese Navy to destroy the Russian Black Sea Fleet at the Battle of Tsushima in 1905, remained relevant into this regime until the striking power of battleships was replaced by aircraft and the torpedo. Once that occurred, naval tactics became more about positioning aircraft carriers to more efficiently pursue aerial tactics.

Once air-to-air tactics became possible, tactics in the air resembled infiltration tactics: bombers attempted to get through air defenses either by themselves or escorted by air-to-air fighters performing the exact same reconnaissance and screening tasks that cavalry used to perform. The ideas of early airpower theorists such as Guilio Douhet almost entirely revolved on this infiltration dynamic between bombers, their escorts, and air defense.

Reconnaissance-Strike Tactics

The new regime is reconnaissance-strike tactics (RST). This regime developed first at sea; naval aviation replaced the naval gun but was quickly augmented by precision-guided missiles. Although naval warfare became rare, ships that sank due to enemy action in the late twentieth and early twenty-first century did so because they were struck by missiles, not gunfire or bombs. Air warfare also came to be dominated by the missile, whether air-to-air, air-to-surface, or surface-to-air defense systems. The People's Liberation Army's antiaccess/

Journal of Advanced Military Studies

area-denial (A2/AD) system, for example, is nothing more than the fusion of numerous missile-based platforms with intelligence, surveillance, and reconnaissance (ISR) platforms to supply them with the necessary information. It is this fusion of ISR with digital networks to feed information to precision-guided lethal and nonlethal platforms such as electronic warfare and cyber systems that characterize the reconnaissance-strike regime and warfare for the foreseeable future.

This emergent practice is sometimes referred to as the precision-strike regime, but reconnaissance-strike better captures the dynamics. Precision-strike weapons platforms are fueling these new tactics, but the ability of these weapons to strike precisely is entirely dependent on the reconnaissance and counterreconnaissance capabilities of the combatants. A precise weapon is useless without the information and processed intelligence that enables them. A focus on the lethality of weapon systems ignores the necessary ISR infrastructure that enables their employment.⁹

None of this is to say that any staple of one tactical regime does not remain relevant and present in future regimes: even massed rifle fire could still be lethally effective in certain circumstances today. These tactical regimes merely describe the primary tactics that military and naval forces sought to exploit on the battlefield. However, just because some of the tactics of one regime remain in the next does not mean a military force wedded only to those tactics can survive: an opponent exploiting the latest regime will easily outmatch a force wedded solely to the old. In 1939, France had a large professional army still built around line of battle tactics, but it was destroyed by the Wehrmacht using armor-infiltration tactics. In 1991, the armor-infiltration equipped Iraqi Army was largely dismantled by U.S. Navy and Air Force aerial reconnaissance-strike tactics before anything else happened. The ongoing Russo-Ukrainian War is another example. The Ukrainian Army is exploiting reconnaissance-strike tactics to maul a Russian Army that might have conceptualized newer doctrine, but clearly remained unable to execute it.

There is thus no strict line in terms of when a tactical regime is created. For example, U.S. Army lieutenant general George S. Patton created not one but two nondoctrinal staff organs to manage information in the Third Army in 1944. While they coordinated with the G-2, they were not part of it, therefore serving as an information warfighting function alongside the intelligence warfighting function to drive the Third Army's tactics.¹⁰ Military innovation is never a straight line progressing from established practice to new ideas, but a process that ebbs and flows and even regresses as warfare changes. Moreover, Carl von Clausewitz tells us that every war will have its own character because political, geographic, technological, social, cultural, and a myriad other factors—although primarily politics—will determine the best mix of tactics for a given conflict, writing that "each period has its own peculiar forms of war, its own restrictive conditions, its own prejudices."¹¹ Occasionally, however, innovations and new technology emerge and trigger widescale changes in practice, producing discontinuities between traditional and innovative methods.

All these tactical regimes are forms of combined arms: ways that militaries combine and coordinate different tactics made possible by the technology of the time. New innovations do not sweep away legacy tactics, instead they are additive. There are no true revolutions in military affairs in the sense of the word that means a complete replacement of an existing system. Emergent forms of combined arms evolve as an extension of the previous system rather than replacement of it.

The Modern System

One such emergent phenomenon is the modern system. The armor-infiltration regime and the reconnaissance-strike regime comprise what Stephen Biddle calls the modern system. The modern system is defined by the key offensive elements of "cover, concealment, dispersion, small-unit independent maneuver, suppression, and combined arms integration."¹² In terms of defense, the modern system privileges "the same exposure-reduction tactics of cover, concealment, dispersion, combined arms, and independent small unit maneuver that modern system attackers require, albeit adapted to the particular problems of the defense."¹³ Biddle's analysis confirms many of the tactical predictions made by the RMA advocates who examined the potential of the reconnaissance-strike regime.

Moreover, this system applies equally to conventional and irregular forces —another distinction that is increasingly meaningless—as the technologies that enable the modern system to proliferate to every strategic actor. The modern system will drive actors toward what Biddle calls "midspectrum warfare": a style of warfare midway between Napoleonic style strategies of annihilation and their opposite—strategies of exhaustion. Midspectrum warfare emphasizes mobility, concealment, dispersion, and depth to mitigate the effects of the reconnaissance-strike regime and is highly dependent on the "complex interaction among mutually dependent specialists."¹⁴ These are simply two different terms for the same emergent phenomenon, which will create identical demands for both "conventional" and "irregular" combatants. Given the parity in technology and weaponry, advantage will increasingly come from people instead. Military forces must be able to effectively train the personnel and staffs that can execute more effective concepts of operation that exploit the modern system better than their opponents, or they will fail.

The armor-infiltration regime and the reconnaissance-strike regime should be treated together, as the latter has not yet made the former obsolete. Yet, they have made analytical distinctions between both maneuver and attrition and between conventional and irregular largely moot. This is a fact aptly captured by Biddle's modern system and midspectrum warfare. The use of reconnaissancestrike systems by both sides in the Russo-Ukrainian War has not invalidated the need for armored maneuver and unguided artillery, the latter of which has caused around 80 percent of the casualties in the conflict by some reports.¹⁵ Nor has either side strictly employed maneuver or attrition tactics nor conventional and unconventional tactics. The emergent reconnaissance-strike regime therefore is additive and has not swept away all the components of previous regimes even as it has swept away meaningful distinctions between legacy terms.

That validation also allows the tactical regime identified by Krepinevich 38 years ago to be defined with greater precision. Reconnaissance-strike tactics are defined as the use of advanced intelligence, reconnaissance, and surveillance assets fused with precision-strike munitions and information-related capabilities to identify and create opportunities for maneuver forces. Intelligence, reconnaissance, and surveillance complexes "pull" lethal and nonlethal fires, the effects of which are subsequently exploited by maneuver forces. This is similar to the concentration of artillery and maneuver forces at one or few points for armor-infiltration tactics, but because of the potency of modern munitions, must be performed without that concentration in space. The proliferation of the necessary platforms and their pervasive use by state and nonstate actors demands that all forces adopt the cover, concealment, dispersion, suppression, combined arms, and independent small unit maneuver methods identified by Biddle and also achieve concentration in time.

Referring to this regime as precision-strike fails to convey the importance of the information processing function that drives this regime as it focuses solely on the characteristics of munitions. Precision munitions are useless without the information necessary to target them. The critical component of reconnaissance-strike combined arms is the digital architecture, unit organizations, and staff processes that facilitate the rapid acquisition, analysis, dissemination, and exploitation of accurate information between ISR platforms, precision strike platforms, and information-related capabilities like electronic and cyber warfare. To perform these tactics well, military forces must master the planning, preparation, synchronization, and sustainment of those tactics through operational art.¹⁶ The core of this regime is not the physical parameters of weapon systems, but the nonphysical processing of information through platforms, networks, and staffs of the combatants.

Combined arms in the reconnaissance-strike regime will thus be less dependent on the individual characteristics of platforms. A platform-centric force with superior technology in terms of munitions, range, and rate of fire may well be handily defeated by a more network-centric force with inferior platforms that are fused together in such a way to facilitate the rapid acquisition, analysis, dissemination, and exploitation of information better than the opponent. The U.S. military flirted with choosing a more network-centric doctrine in the early twenty-first century. That shift is no longer a choice but an imperative.

This is playing out in Ukraine as this article is written. The Russian Army, well-equipped and numerically superior but wedded to traditional hierarchical command and control networks and armor-infiltration doctrine is being mauled by a much smaller Ukrainian Army that is not. The right mix of reconnaissance-strike tactics and operational art trumped the technological and numerical superiority of the Russian armed forces. At least initially, Ukraine is benefiting from the donations of superior Western platforms. Notably, when Ukraine attempted a more traditional armor-infiltration style offensive in the summer of 2023, it was not as successful as its earlier reconnaissance-strike style tactics, although many other factors contributed.¹⁷

Combined arms will change under the reconnaissance-strike regime as well. While the traditional combination of maneuver, fires, and armor will remain, the relationship between them will change, as noted above. Additionally, more arms will join the fray. The legacy lethal platforms will be augmented by nonlethal information-related capabilities like electronic and cyber warfare, which will provide battlefield effects in addition to information and reconnaissance functions.

Forms of Reconnaissance-Strike Tactics

Despite their eventual failure in Ukraine, it was the Russians that first conceptualized this regime. Their conception gives the idea its name and led to the analysis performed by the Office of Net Assessment cited above. The Russians developed reconnaissance-strike and reconnaissance-fires complexes. The reconnaissance-strike complexes integrate and employ long-range, high-precision fires, and the reconnaissance-fires complex integrate and guide surface-to-surface artillery fires from Russian artillery units.¹⁸ In Russian terminology, a complex is akin to a task force of different platforms, units, and personnel designed around a certain function. In this case, fires. They combine various sensors and observation platforms—the reconnaissance part networked together that directly feed data to fires platforms (the strike part).

In 2008, Russia began reforming its military to take advantage of these concepts. These reforms included streamlining command hierarchies, employing fewer but better trained units, and increasing the professionalization of Russian servicemembers.¹⁹ In terms of maneuver forces, the Russian Army reformed around the battalion tactical group with more fires and armor than previous structures.²⁰ These concepts and the updated force design initially performed well in Syria and the initial invasion of Ukraine in 2014, but since the larger-scale invasion of Ukraine in 2022, they have largely collapsed as the Russian military could not employ or sustain them at scale. While they may have gotten the initial form and reorganization correct, the Russian armed forces lack the human capital—especially in the form of highly trained and empowered non-commissioned and company grade officers—necessary to execute such complex tactics well.

The People's Liberation Army and Reconnaissance-Strike Tactics

The PLA's concept for how it will organize itself to fight as an informatized force is systems confrontation warfare, sometimes called system-of-systems warfare. The central tenet of this concept is that warfare is "no longer a contest of annihilation/attrition between opposing military forces, but rather a clash between opposing operational systems . . . an enemy can be defeated if its operational system can be rendered ineffective or outright unable to function through the destruction or degradation of key capabilities, weapons, or units that compose the system."²¹ Much like maneuver warfare, the PLA will not seek to just destroy the opposing force but instead will target capabilities that tie that force together and enable it to operate as a cooperative system (hence systems confrontation warfare). For this to work, the PLA believes it has to achieve information "superiority" or "dominance" so it can ascertain how an opposing force is arrayed and which key components can be attacked to disassemble or disaggregate it. Once a system is so disordered, the now individual noncooperative components can be attacked and overwhelmed at will. Hence, information warfare is central to the PLA's entire operating concept, and its main effort for its own force design efforts.

The PLA has designed joint staffs around this concept. Rather than organizing them by service component or by the traditional functions of S-1, S-2, S-3, etc., the PLA has broken all those stovepipes and organized high-level staffs around reconnaissance-strike tactics. The five "component systems" of these staffs are: 1) the reconnaissance-intelligence system that collects information, prevents the adversary from collecting information, and provides situational awareness to the entire force; 2) the information confrontation system that employs electronic and cyber capabilities to both collect on and disrupt the adversary's systems; 3) the command systems, which provides command and control and decision assistance to PLA commanders; 4) the firepower strike system, which is the units that act based on intelligence gained by the other components including long-range precision fires but also maneuver forces from across the PLA services and domains; and 5) the support system, which provides enabling functions like logistics, sustainment, medical support, and maintenance to the whole. This "operational system" will reside at the equivalent of Joint task force level but is clearly organized around winning the information warfare fight and

executing reconnaissance-strike tactics. Lastly, these component systems may be task organized. Once stood up, a headquarters may have only some of these component systems in combination depending on the task.

Of note, these component systems roughly correspond to the four steps of the OODA loop—observe, orient, decide, and act—with the exception of the support system. The reconnaissance-intelligence system observes information, the information confrontation system orients that information within the system (and tries to disorient the adversary system), the command system decides, and the firepower-strike system acts. It is far too early to say whether this cybernetic way of organizing for reconnaissance-strike tactics is effective or not given that it has not been tested in combat, but it is clearly an attempt to achieve a new network-centric organizational construct adapted to the modern system.

While systems confrontation warfare describes how the PLA intends to organize their high-level staffs for modern warfare, systems destruction warfare lays out how the PLA intends to attack another modern force. Systems destruction warfare "seeks to paralyze the function of the enemy's operational system."²² It is intended to create the same kind of operational paralysis as described in Warfighting by disaggregating the enemy's ability to work as a cooperative system-of-systems. It does so by targeting four prioritized types of targets through both kinetic and nonkinetic means. The highest priority targets are those that will disrupt the ability of the adversary to transmit information. These include anything from communications to sensors to servers and command and control nodes. If successful, the adversary is "information isolated."23 The second priority is "essential elements."24 An essential element will most likely be defined by the type of enemy the PLA is facing. The essential element of an artillery unit is its cannons, for example, so those targets would be struck next. The third set of targets is "operational architecture."25 This term is also unclear, but it might be referring to the logistics and mobility infrastructure required to move and support forces around the battlespace such as heavy vehicles, airfields, connectors, and ports. Lastly, PLA writings refer to attacking the adversary's "reconnaissance-control-attack-evaluation" process.²⁶ This could mean attacking any remaining C4ISR capability or directly attacking the opponent's OODA loop, or even the destruction of headquarters staffs.

In this way, the PLA intends to employ reconnaissance-strike tactics against a prioritized set of targets to render an opponent deaf, blind, mute, and paralyzed. It is about attacking vulnerabilities, which creates opportunities that enable the attack of more vulnerabilities. Both systems confrontation warfare and systems destruction warfare are built around the core idea that warfare in the information age will be information-centric, making information processing both a strength and a potential vulnerability. Systems confrontation warfare exploits that fact by organizing PLA forces to foster fast, accurate, and reliable information acquisition, analysis, and dissemination while systems destruction warfare turns the necessity for information into a vulnerability for the enemy by directly attacking their ability to use it. While U.S. forces tend to have separate processes for ISR, targeting, and fires run by separate cells in separate staff sections, which are—in theory—fused later, the PLA designed a fused process for reconnaissance-strike tactics and then built an integrated staff around it.

These concepts can also shed light on the PLA's A2/AD system. In reality, the system is nothing more than a coastal defense system capable of reconnaissance-strike tactics. The PLA repurposed older coastal defense concepts, married them to reconnaissance-strike tactics, and applied it to their maritime operating area.

A closely connected concept for PLA recon-strike tactics is integrated network and electronic warfare (INEW). This concept fuses cyber and electronic warfare capabilities to identify and target enemy forces. The PLA's strategic support force (SSF) centralized these two capabilities and is meant to provide that information to PLA operational forces, although since this article was written the PLA has reorganized again and disbanded the SSF, splitting it into an aerospace force, a cyberwarfare force, and an information support force.

Moreover, the PLA's doctrine is a combination of principles from both maneuver warfare and attrition warfare. It can be summarized as a maneuver warfare like focus on asymmetries and critical vulnerabilities married to an attrition warfare style centralized command and control philosophy. It is further evidence that these terms have largely become meaningless.

These concepts reflect a PLA-wide focus on reconnaissance-strike tactics, recently termed multidomain precision warfare, for roughly the last 15 years.²⁷ The PLA is thus significantly ahead of the United States when it comes to conceptualizing, integrating, and institutionalizing reconnaissance-strike tactics. The PLA's A2/AD system is already operational and threatens the ability of U.S. forces as currently designed to project force in the Western Pacific. This is not to say the United States cannot catch up. Each of the Services is tackling the problem in its own way.

U.S. Army multidomain task forces (MDTF) most closely resemble a Soviet reconnaissance-strike/fires complex. Like the Russian version, the MDTF marries an artillery brigade to electronic and cyber warfare platforms for sensing and targeting. However, it is unclear which if any U.S. partners would be willing to host such a large organization or if they can be sustained in a contested environment.²⁸ The intended platforms that the MDTF will employ are also significantly outranged by PLA rocket force assets that, in a conflict, will have far less of a logistics burden as they will be operating from their home bases.²⁹

The components of combined Joint all-domain command and control

Reconnaissance-Strike Tactics

(CJADC2) may in effect produce the necessary network connectivity to enable RST across the Joint force. The Navy's component, Project Overmatch, promises a networked battle capable of the fusion of capabilities through rapid information acquisition, analysis, dissemination, and exploitation necessary to execute RST.³⁰ However, the Navy will need to organize task forces far more around the missile than the carrier air wing to provide precision strike at relevant ranges.³¹ The Air Force's Advanced Battle Management System and the Army's Project Convergence seek to achieve similar sensor-to-shooter fusion. Additionally, the Air Force concept agile combat employment (ACE) may enhance the Air Force's ability to complicate adversary force efforts to target its airframes and infrastructure, slowing down adversary RST while simultaneously retaining the ability to prosecute them. Bombers, especially the new Northrop Grumman B-21 Raider, and Navy ships equipped with vertical launching systems (VLS), will be a primary kinetic component of the joint force's total reconnaissance-strike complex.

These efforts are mostly in the conceptual or experimental phase and so far do not add up to true integration or institutionalization of recon-strike tactics. Efforts will be held back by the conceptualization of these tactics as "kill chains" and "kill webs." These concepts are inherently platform-centric, they are focused on depicting the systems and platforms necessary to detect, track, prosecute, and evaluate a singular target. Kill chains are stripped of the all-important context in the form of doctrine, organizations, and the humans that must actually perform all the steps of the chain in combat. They are highly reductionist attempts to impose linearity on the inherently nonlinear phenomenon of warfare. In essence, kill chains fail to depict the reality of U.S. forces as a complex adaptive social system facing an opposing complex adaptive social system, not just a wire diagram of connected technology. The PLA's conceptualization and integration of reconnaissance-strike tactics through its system-of-systems doctrine, which organizes high-level PLA staffs around the information requirements of modern tactics, is therefore more sophisticated and is driving all their modernization efforts.

While the efforts of advanced militaries to create forces capable of RST get the most attention, nonstate actors are also capable of employing them. Unlike armor-infiltration tactics, which required a large and modern economy to support them, the proliferation of precision-guided munitions and digital communication devices around the world, the necessary hardware for RST, is widely available. If married with effective "software" in the form of tactical employment, a nonstate actor can compete at least at a limited scale with a more advanced state actor. Hezbollah in Lebanon and the Houthis in Yemen at least have the necessary capabilities to prosecute a form of RST. Hezbollah stymied the Israeli military in Lebanon in 2006 with distributed teams employing

precision-guided munitions and the Houthis have attempted to strike U.S. Navy ships offshore but were unable to penetrate the ship's defenses.

Despite this effort at conceptualization, it is not clear that any military force has reached true doctrinal and organizational institutionalization. Each can perform RST in limited scale or in certain favorable situations, but as of yet they dominate no specific force. Instead, military forces remain in conceptual and experimental phases. Practice in actual combat remains limited enough to prevent a full revolutionary transition. A survey of recent conflicts indicates that military forces are beginning to execute reconnaissance-strike tactics, but are not sure how best to exploit them at scale.

Perhaps the most creative application of reconnaissance-strike tactics thus far was the Taliban's lightning campaign to seize Afghanistan in the spring of 2021 as U.S. forces withdrew. Lacking the technological components of the reconnaissance-strike regime, the Taliban instead focused on a yearslong influence operations campaign to turn Afghan Army commanders and leadership. This provided the reconnaissance component by evaluating which Afghan units would resist and which would not. This also included the "strike" component by turning those commanders that were willing to defect or adopt nonresistance. This enabled the Taliban to focus "maneuver" forces on units that might or would resist. The campaign was an example of focusing reconnaissance-strike tactics on the decapitation defeat mechanism, further discussed below.³²

The Nagorno-Karabakh War demonstrated the potency of reconnaissance-strike tactics in the defense through the application of unmanned aerial vehicles and long-range fires against the destruction defeat mechanism. Both Azeri and Armenian forces attempted repeated concentrations and offensives, most of which were ineffective. The Armenians lacked unmanned aerial vehicles and their air defense was extremely poor, enabling the Azeri to wreak havoc with long-range fires. However, at the Battle of Shusha, an outnumbered force of most light infantry Azeri troops was able to defeat a numerically superior Armenian force employing armored vehicles with antitank weapons and longrange fires spotted by unmanned aerial vehicles.³³

Lastly, Russia tested its reconnaissance-fires complex in Syria but, when Russian forces attempted to employ it in Ukraine at large scale, they failed to make the system work against a determined and well-equipped enemy. As of the time of this writing, Russian forces capable of the concept are largely gone and the battalion tactical groups no longer exist.³⁴

In sum, the technology that drives reconnaissance-strike tactics is fully proliferated and increasingly democratized and thus available to any actor. However, there has yet to emerge proven models for how to employ them at scale and how they can provide a reliable defeat mechanism.

Reconnaissance-Strike Tactics and Defeat Mechanisms

In an article for *Parameters*, Dr. Frank Hoffman tried to cut through the noise of constant debates over maneuver and attrition by refocusing the debate on defeat mechanisms. Hoffman laid out four defeat mechanisms. These defeat mechanisms are dislocation, destruction, disorientation, and degradation.³⁵ This conception is superior to the simplistic maneuver versus attrition construct and provides the tactician with a conceptual goal toward which to apply tactical tenets such as mass, maneuver, and firepower.

In the context of the reconnaissance-strike regime, the defeat mechanism provides a way to prioritize targets for reconnaissance-strike tactics depending on the effect the commander seeks to achieve. To seek dislocation, for example, RST can be applied to fix and immobilize enemy forces to render them vulnerable to positional maneuver, achieving dislocation. One side may use RST to target adversary command and control nodes with precision fires while employing electronic warfare to disrupt maneuver unit communications to prevent them from immediately reforming connections, achieving degradation. To these four, however, we must add two more.

Degeneration is a defeat mechanism that can be achieved by targeting the opponent's logistics and sustainment capabilities. The reconnaissance-strike regime has magnified the ability of actors who employ such platforms to contest the lines of communication of an opposing force and to target supply and ammunition magazines that were once easily kept out of the fray. The Ukrainian armed forces have employed this schema to great effect, targeting the supplies and lines of communication of an already shaky and overstretched Russian logistics pipeline.³⁶

Decapitation, which a number of authors have written about before, can be achieved by targeting the opponent's leadership. Some adversary forces may heavily depend on high-level and/or centralized leadership to operate. Ukraine has also employed this defeat mechanism, taking advantage of the poor companygrade officer and noncommissioned officer leadership of the Russian military by targeting high level command posts for destruction.

These defeat mechanisms are tactical theories of victory, just like attrition warfare and maneuver warfare are two different tactical theories of victory. However, reconnaissance-strike tactics enable more targeted and tailored theories of victory than just maneuver or attrition. Tacticians and staffs should instead evaluate an enemy force against which defeat mechanisms are the most appropriate for them. Multiple defeat mechanisms can be employed at a time but conceptualizing them in this way will assist commanders in weighing and supporting certain defeat mechanisms over others, depending on the threat. **Figure 1.** Defeat mechanisms and how reconnaissance-strike tactics can be employed to achieve them



Source: courtesy of author, adapted by MCUP.

Exploitation

Yet, calling these concepts tactical theories of victory or defeat mechanisms is a bit of a misnomer; nothing can guarantee victory or defeat, nor will their application always produce these effects. Rather, what they will produce is an opportunity for exploitation. Almost any opposing military force, rocked by an effective attack, will recover if given the time and space to do so. Clausewitz stressed that an engagement, as a means to an end, must be followed up by a pursuit—or exploitation—to achieve a decisive effect.³⁷ As ever, the key to a victory is the exploitation actions that will prevent the time and space necessary for an adversary to recover from the engagement.

The effects achieved by the defeat mechanisms are all ephemeral: most warfighting organizations will be able to adapt to them, some in short order. Therefore, an opponent can only be truly defeated if the effects achieved by reconnaissance-strike tactics employed against defeat mechanisms are exploited. This exploitation will take on different forms according to domain.

Land forces are suited to dislocation, destruction, and disorientation. Once one or more of these effects are achieved and the opposing ground forces are unable to act in concert, maneuver forces can then exploit that disability through more traditional attacks against vulnerable weak points, flanks, gaps, degraded, or retreating opposing forces. This is an inversion of the previous tactical regime where planning focused on projected decision points for maneuver forces, which were in turn supported by fires. Under the reconnaissance-strike regime, reconnaissance-strike tactics will be focused on acquiring targets for long-range

70

precision fires platforms. Maneuver forces will then advance based on the effects of those fires. In some cases, "pushing" exploitation forces against preplanned axes of advance may give way to battle damage assessments that "pull" maneuver forces against points made weak by the effects of reconnaissance-strike tactics. The Ukrainian armed forces are already adapting to these changes in just this way, attacking Russian defensive lines on multiple axes to threaten lines of communication via long-range precision fires, a clear example of maneuver supporting fires.³⁸

Naval forces are suited to act in much the same way, although the means of reconnaissance-strike tactics will be greater since subsurface forces can ably perform this mission. Naval reconnaissance-strike tactics will also focus on dislocation, destruction, and degradation to reduce and degrade both opposing surface and subsurface forces as well as shore-based antiacces/area-denial systems covering key maritime terrain such as lines of communication, ports, straits, etc. This is aptly described by the late Captain Wayne Hughes as achieving the ability to "attack effectively first."³⁹ Once sea control is achieved, naval forces will have additional defeat mechanisms available such as degradation of the opponent's society through commercial blockades, although degradation of the opponent's naval logistics through blockades or other means is always a possibility for naval forces.

Air forces will have the most options for exploitation. Air forces will use reconnaissance-strike tactics for disorientation and degradation of air defense and air-to-air platforms to achieve localized and temporary air superiority. Once that is achieved, air forces are extremely suited to enable and perform reconnaissance-strike on behalf of naval and land forces, contributing to even more defeat mechanisms or enabling follow on exploitation. Lastly, the air superiority achieved can further be exploited through destruction of not just enemy forces but infrastructure and industrial networks to achieve degradation at a wide scale. Air forces can also exploit their inherent range and precision to pursue decapitation mechanisms against opposing forces and opposing political leadership.

Space forces are relatively nascent but may someday involve space-to-space reconnaissance-strike tactics with an aim toward space control. For now, space forces are perhaps the most potent enabler of reconnaissance-strike tactics conducted by air, naval, and land forces. Surveillance satellites are one of the prime innovations that are driving the transition from armor-infiltration to reconnaissance-strike tactics as they are so critical to driving the acquisition of targets and the guidance of precision-guided munitions.

Airborne and amphibious forces, as inherently cross-domain forces with limited capacity for sustainment, will have more limited capacity for RST at scale but will be uniquely suited to conduct reconnaissance-strike tactics to enable other forces and exploit the effects of other forces. The Marine Corps is already leaning into this development through the reconnaissance-counter reconnaissance mission of stand-in forces. Given the ability of peer components to exploit reconnaissance-strike tactics themselves to achieve degradation against follow-on forces and their logistics, the ability of airborne and amphibious forces to rapidly project force across domains will make them extremely valuable, especially when employed to exploit defeat mechanisms achieved by air and naval forces.

While cyber and electromagnetic warfare are usually broken out in their own domains, the fact is that all the forces above will have to use both cyber and electronic warfare to acquire the information necessary for reconnaissance-strike tactics, deny it to the opponent, and employ them as strike mechanisms. Breaking them out into their own discrete domains will prevent this necessary integration across all forces.

Of course, these are just generalities. Different opponents will have different strengths and weaknesses and therefore will present different threats and opportunities for reconnaissance-strike forces applied against defeat mechanisms.

The key to implementing RST is not buying better or more platforms. It is not even conceptualizing how the required systems can be used in the future. The key is organizing military forces to efficiently and effectively integrate them into a combined arms concept. The important part of any combined-arms system is not the arms part but the combined part and combination comes through effective organization.

Staffs at every echelon will likely need to be organized around the targeting process as their primary function, instead of treating it as a bolt-on or ad hoc board as they do now. The fusion of intelligence, surveillance, and reconnaissance data, information-processing, and kinetic and nonkinetic strike systems is too complex, dynamic, and important to continue treating as an afterthought. The U.S. military will have to organize units that marry intelligence, surveillance, and reconnaissance platforms, long-range precision fires and effects, and the authority to employ them in one unit. They must be organic, not distant enablers or even attachments. These methods of employing low density capabilities were sufficient for the armor-infiltration regime but will not remain so for the reconnaissance-strike regime.

Implications for Amphibious Warfare: The Next Force Design

The advent of the reconnaissance-strike regime creates a number of vulnerabilities for amphibious forces. First, the sea and air control necessary to execute large-scale amphibious assaults from offshore will be disrupted at best and completely negated at worst. Amphibious forces will have to operate further offshore and move faster than ever before, necessitating a focus on amphibious raids rather than assaults.⁴⁰ Second, once amphibious forces are engaged in an amphibious operation, the necessary naval assets will likely not be able to stay in place and support them during execution, unless amphibious raids can first disrupt adversary control of the shore and the seaward space first. Third, the traditional amphibious assault method of massing amphibious forces at a single point and then expanding outward will be extremely risky, necessitating smaller-scale and more distributed operations first to enable a window of opportunity for one to occur.

Fortunately, the Marine Corps has already addressed many of the vulnerabilities created by the advent of the reconnaissance-strike regime through *Force Design 2030*. First, amphibious warships are more vulnerable to precision fires than they have ever been, necessitating the diversification of amphibious platforms, namely the landing ship medium acquisition. Second, shedding the logistics intensive M1A1 Abrams tanks and converting some cannon artillery units to rocket artillery reduces the Marine Corps dependencies on theater sustainment, which will be impossible in the early stages of a Pacific war. The M1A1 has also become vulnerable to the exact types of RST weapons that have proliferated around the world. Third, a renewed focus on distributed operations in doctrine and through the expeditionary advanced base operations and standin forces concepts will mitigate the vulnerabilities of traditional approaches to amphibious warfare. Fourth, it enhanced its ability to assist the Navy by acquiring systems and munitions that can contribute to sea control in a variety of theaters.

These efforts were all well-founded, based on years of analysis and development, and vital for the Marine Corps to remain capable of meeting its responsibilities to the Navy and the rest of the Joint Force. While mitigating the vulnerabilities of the reconnaissance-strike regime was necessary, the Marine Corps must now turn to exploiting the potential of the reconnaissance-strike regime during the late 2030s and 2040s time frame.

The top priority of that effort is already being addressed: the Marine Corps is pursuing strike technologies to enhance the firepower of Marine infantry. However, this does not just mean getting newer weapons into the hands of Marines. It means a bottom-up driven effort to experiment with such weapons and equipment like drones and then feed the resulting tactical insights into doctrine. This should be fast-tracked by creating a temporary office tasked with interviewing Marines as they experiment with new weapons and then providing the resulting analysis directly to Marine Corps Combat Development Command for implementation in doctrine.

The Marine Corps should resist any temptation to get sidetracked into an effort to standardize a new infantry squad, platoon, company, or battalion. As Marine veteran H. John Poole pointed out in his recent book *Advanced Tactics in America*, standardization of infantry combat units and drills disables the creativity and innovation necessary to develop tactics as new problem sets emerge.⁴¹ Marine Corps infantry units should be task-organized depending on their assigned mission, area of responsibility, and role within the MAGTF, allowing their commanders to design and equip to task rather than to a standard institutional model.

The exploitation of robotics should be another high priority. The Marine Corps should pursue an "augment the Marine, don't replace the Marine" philosophy when it comes to the exploitation of robotics, but it must do so to the greatest extent possible at the greatest speed possible. Peer adversaries and friendly partners like Ukraine are already outpacing the Marine Corps in terms of exploiting robotics. The Marine Corps should partner with the Navy to develop the platforms and tactics to turn amphibious warships—when not embarking Marines—into robotic systems motherships.

Third, in the 2040s the Marine Corps must invest in a long-range, fastattack landing vessel like the Swedish Navy's Stridsbat 90 HS that depends on speed and range for protection. The M variant of this vessel would allow 20 Marines to be landed on an opposing shore. A vessel of this type is necessary to increase the Marine Corps' ability to execute amphibious raids to destroy and disrupt shore-based anti-ship missiles and sensors, clearing the way for follow-on forces in medium landing ships or launching from amphibious warships.

Fourth, the Marine Corps must develop the MAGTF information group into a full-fledged information combat element. Information is the lifeblood of precision-strike weapons and reconnaissance-strike tactics. Without accurate data, none of it works. Therefore, it is incumbent on the Marine Corps to develop an information combat element tasked with attacking adversary command and control and kill chains while feeding and protecting those of the MAGTF itself. As the reconnaissance portion of the reconnaissance-strike regime becomes as much about signals, electronic, and cyber as physical reconnaissance, the MAGTF needs a subordinate element tasked with and empowered to fight the reconnaissance-counterreconnaissance fight. This would enhance the Marine Corps' ability to employ the degradation defeat mechanism, among others.

Last, the strongest asymmetric advantage the United States has against any adversary is its ability to form and sustain coalitions. For the Marine Corps, this means more security cooperation than ever before and, as a stand-in force, it means combined irregular warfare. The Marine Corps used to be the leader among U.S. Service branches when it comes to combined irregular warfare. From the Banana Wars to the combined action platoons of Vietnam, the Marine Corps has a long history in executing this mission and executing this mission well. But, it has largely abandoned that tradition except for the air-naval gunfire liaison company community. The Marine Corps can recapture this tradition by codifying the experience of military transition teams in Iraq and Afghanistan and writing a new *Small Wars Manual*, built on lessons old and new. A new *Small Wars Manual* would serve as the guide for Marines participating in combined irregular warfare, whether forward as a stand-in force and elsewhere in training or the limited wars likely to occur during great power competition.

Conclusion

Leaders should be wary of the tyranny of the present when it comes to examining the lessons of the ongoing Russo-Ukrainian War. However, the war has also validated many long-standing predictions. It should be viewed not as the beginning of something new but rather the culmination of a number of trends, all of which have been examined extensively. Viewed in that light, the lessons may indeed be more reliable than most conflicts. T. X. Hammes has noted that the Russo-Ukrainian War has demonstrated both continuity and change in warfare. The "game-changers" he described are the Ukrainian use of integrated command and control, pervasive surveillance and reconnaissance, and massed precision fires.⁴² In other words, Ukraine has managed to execute reconnaissance-strike tactics and Russia has not. Older tactics and the traditional platforms of the armor-infiltration regime are not obsolete, but the reconnaissance-strike regime offers additional tactical possibilities that effective military forces will exploit. This conclusion matches the prescient analyses by Krepinevich and Biddle mentioned above.

What *is* obsolete are simplistic depictions of tactics as either "maneuver" or "attrition." So, too, is the definition of tactics as either "conventional" or "irregular." Recognition that the proliferation of emergent technology does not obviate but instead interacts with more traditional platforms and produces a more complex regime of new tactical possibilities, which calls for a more sophisticated theoretical framework.

The above framework linking the component parts of reconnaissance-strike tactics with Hoffman's concept of defeat mechanisms offers a critical framework for thinking about tactics on the modern battlefield that can help tactical commanders and operational staffs bridge the gap between codified doctrine and the dynamics of a rapidly changing battlefield. The emergence of reconnaissance-strike tactics is ongoing but advanced enough to conclude that its emergence will continue. This does not mean that the platforms, tactics, and concepts of the previous regime are obsolete. Rather, it means that the interactions between these platforms and tactics must be reevaluated in the context of the reconnaissance-strike regime.

Services must design their forces for the tactical regime they are in. For am-

phibious forces, this means the use of longer-range fires to protect ship-to-shore movement, the use of longer-range and faster connectors, and a more diverse array of surface platforms able to disperse combat power at sea and concentrate only for the assault phase of an amphibious operation. It means a greater focus on amphibious raids over amphibious assaults.⁴³

Finally, just as tactical thought should not focus solely on technology, neither should force design efforts. Success in the modern system is more about the organization of highly trained staffs and teams that in turn coordinate the tactics made possible by emergent technology in a combined arms manner. EABO and SIF are examples of applications of this concept for specific forces and situations, but the Marine Corps lacks a capstone concept that governs how these concepts and forces will work in concert with traditional ones.⁴⁴ Some have called for a revision of *Warfighting*, but as a philosophy it is still the core ethos of the organization and that should not change. Rather, this indicates that it is Marine Corps Operations, MCDP 1-0, which should be revised to serve as a doctrinal forcing function to tie emergent and legacy tactics together. Such a revision would describe new tactics made possible by the reconnaissance-strike regime and Force Design 2030, which capabilities and tactics from legacy regimes should be maintained, and how to use them to serve as defeat mechanisms against adversaries, moving beyond traditional discussions of attrition versus maneuver.

Endnotes

- 1. *Warfighting*, Marine Corps Doctrinal Publication 1 (Washington, DC: Headquarters Marine Corps, 1997).
- Franz-Stefan Gady and Michael Kofman, "Ukraine's Strategy of Attrition," *Survival* 65, no. 2 (April–May 2023): 8, https://doi.org/10.1080/00396338.2023.2193092.
- 3. Gady and Kofman, "Ukraine's Strategy of Attrition," 8.
- Amos Fox, "Manoevre Is Dead?: Understanding the Conditions and Components of Warfighting," *RUSI Journal* 166, nos. 6–7 (2021): 10–18, https://doi.org/10.1080/03 071847.2022.2058601.
- 5. Andrew F. Krepinevich Jr., *The Military-Technical Revolution: A Preliminary Assessment* (Washington, DC: Center for Strategic and Budgetary Assessments, 2022).
- 6. Krepinevich, The Military-Technical Revolution, 37–38.
- For more on this tactical regime, see Archer Jones, *The Art of War in the Western World* (Urbana: University of Illinois Press, 2001). Jones traces the use of these four types of forces throughout the book.
- 8. For more on this development, see Bruce Gudmunsson, *Stormtroop Tactics: Innovation in the German Army, 1914–1918* (Westport, CT: Praeger Publishers, 1995).
- 9. Olivia Garard, "Lethality: An Inquiry," *Strategy Bridge*, 1 November 2018.
- Spencer L. French, "Information Forces and Competitive Approach to Information Enabled Operational-Level Success in August 1944," *Military Review*, March–April 2022, 54–66.
- 11. Carl von Clausewitz, *On War*, trans. J. J. Graham (New York: Barnes and Noble Books, 2004), 659.
- Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle* (Princeton, NJ: Princeton University Press, 2004), 35.

- 13. Biddle, Military Power, 44.
- 14. Stephen Biddle, *Nonstate Warfare: The Military Methods of Guerrillas, Warlords, and Militias* (Princeton, NJ: Princeton University Press, 2021),74.
- David Hambling, "Artillery Paradox: How Ukraine Does More Damage with Fewer Rounds than Russia," 19FortyFive, 22 April 2023.
- B. A. Friedman, On Operations: Operational Art and Military Disciplines (Annapolis, MD: Naval Institute Press, 2021), 5.
- 17. Michael Kofman and Rob Lee, "Perseverance and Adaptation: Ukraine's Counteroffensive at Three Months," *War on the Rocks*, 4 September 2023.
- Michael Kofman et al., Russian Military Strategy: Core Tenets and Operational Concepts (Arlington, VA: CNA, 2021), 78–79.
- 19. Bettina Renz, Russia's Military Revival (Medford, MA: Polity Press, 2018), 63-65.
- Nicholas J. Fiore, "Defeating the Russian Battalion Tactical Group," Armor Magazine, Spring 2017.
- 21. Jeffrey Engstrom, *Systems Confrontation and Systems Destruction Warfare* (Santa Monica, CA: Rand, 2018), 2–4.
- 22. Engstrom, Systems Confrontation and Systems Destruction Warfare, 15.
- 23. Engstrom, Systems Confrontation and Systems Destruction Warfare, 16.
- 24. Engstrom, Systems Confrontation and Systems Destruction Warfare, 17.
- 25. Engstrom, Systems Confrontation and Systems Destruction Warfare, 17.
- 26. Engstrom, Systems Confrontation and Systems Destruction Warfare, 18.
- Colin Demarest, "China Developing Own Version of JADC2 to Counter US," C4IS-RNET, 5 January 2023.
- 28. Larry M. Wortzel, *What the Chinese People's Liberation Army Can Do to Thwart the Army's Multi-Domain Task Force* (Arlington, VA: Institute of Land Warfare, Association of the United States Army, 2019).
- 29. The longest-range weapon in the MDTF's arsenal will be the long-range hypersonic weapon with a range of 1,725 miles. See Charles McEnany, "Multi-Domain Task Forces: A Glimpse at the Army of 2035," Association of the United States Army, 2022. The PLA rocket force currently fields seven missiles with greater ranges: the DF-26 (~1,864 miles), the DF-4 (~3,107), the DF-31 (~4,350 miles), the DF-31A and DF-31AG (both ~6, 835 miles), the DF-5 (~7,500 miles), and the DF-41 (~8,078 miles). See Decker Eveleth, *People's Liberation Army Rocket Force Order of Battle* (Monterey, CA: James Martin Center for Nonproliferation Studies, 2023).
- Kris Osborn, "Project Overmatch: What Is Behind This Navy Warfighting Program?," National Interest, 19 November 2021.
- See Dmitry Filipov, "A Fleet Adrift: The Mounting Risks of the U.S. Navy's Force Development," Center for International Maritime Security, 13 February 2023.
- Bill Roggio, "Taliban Doubles the Number of Controlled Afghan Districts since May 1," *Long War Journal*, 29 June 2021.
- John Spencer and Harshana Ghoorhoo, "The Battle of Shusha City and the Missed Lessons of the 2020 Nagorno-Karabakh War," Modern Warfare Institute, 14 July 2021.
- Jack Watling and Nick Reynolds, *Meatgrinder: Russian Tactics in the Second Year of Its Invasion* (London: Royal United Services Institute, 2023).
- Frank Hoffman, "Defeat Mechanisms in Modern Warfare," *Parameters* 51, no. 4 (2021): 49–66, https://doi.org/10.55540/0031-1723.3091.
- 36. Bonnie Berkowitz and Artur Galocha, "Why the Russian Military Is Bogged Down by Logistics in Ukraine," *Washington Post*, 30 March 2022.
- 37. Clausewitz, On War, book 4, chap. 12.
- Jan Kallberg, "Ukraine—Victory Is Closer than You Think," Center for European Policy Analysis, 23 August 2023.
- 39. Wayne P. Hughes Jr., *Fleet Tactics and Coastal Combat* (Annapolis, MD: Naval Institute Press, 2000), 40.
- 40. B. A. Friedman, "Naval Strategy and the Future of Amphibious Operations," in On Contested Shores: The Evolving Role of Amphibious Operations in the History of Warfare,

ed. Timothy Heck and B. A. Friedman (Quantico, VA: Marine Corps University Press, 2020), 355, https://doi.org/10.56686/9781732003149.

- 41. H. John Poole, Advanced Tactics in America (Emerald Isle, NC: Posterity Press, 2022).
- 42. T. X. Hammes, *Game-Changers: Implications of the Russo-Ukraine War for the Future of Ground Warfare* (Washington, DC: Atlantic Council, 2023).
- 43. Friedman, "Naval Strategy and the Future of Amphibious Operations," 355–63.
- 44. B. A. Friedman, "First to Fight: Advance Force Operations and the Future of the Marine Corps," *Journal of Advanced Military Studies* 11, no. 2 (Fall 2020): 119–40, https://doi.org/10.21140/mcuj.20201102007.