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An Overview of Land Warfare

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“The past is never dead. It’s not even past.”

—William Faulkner¹

Since the dawn of time, as historian T. R. Fehrenbach wrote in *This Kind of War*, “the object of warfare [has been] to dominate a portion of the earth, with its peoples, for causes either just or unjust. It is not to destroy the land and people, unless you have gone wholly mad.”² Fehrenbach was analyzing U.S. involvement in the Korean War, and in his preface, he draws a lesson from that war—fought in a time of great-power competition between nuclear-armed adversaries—that bears revisiting today:

The great test placed upon the United States was not whether it had the power to devastate the Soviet Union—this it had—but whether the American leadership had the will to continue to fight for an orderly world rather than to succumb to hysteric violence... Yet when America committed its ground troops into Korea, the American people committed their entire prestige, and put the failure or success of their foreign policy on the line.³

Over the past 15 years, the United States has become an expeditionary power, largely based in the Continental United States, accustomed to projecting power by dominating the air, maritime, space, and cyber domains. U.S. superiority was routinely contested only in the land domain, albeit largely by irregular adversaries, insurgents, and terrorists. U.S. domain supremacy is eroding, if not ending, with the renewal of great-power competition

with state actors—principally China and Russia—that can contest U.S. operations to some degree in all domains. This reality will shape how land forces contribute to U.S. security now and into the future.

Where We All Live

Of all the domains, the land domain has the greatest ability to create operational friction. It is the environment that informed Clausewitz’s admonition that “Everything in war is very simple, but the simplest thing is difficult.”⁴ Soldiers and Marines cannot “slip the surly bonds of earth.”⁵ It is the domain where humans live, and operating there almost certainly results in human interaction—for good or ill.

The Inherently Complex Physical Aspects of Terrain. The land domain, unlike other physical domains (air and maritime) is highly variable, and its very nature forces adaptation by ground forces. According to the Army’s 2005 working definition:

[“Complex terrain” is comprised of] those areas that severely restrict the Army’s ability to engage adversaries at a time and place of its choosing due to natural or man-made topography, dense vegetation or civil populations, including urban, mountains, jungle, subterranean, littorals and swamps. In some locales, such as the Philippines, all of these features can be present within a ten-kilometer radius.⁶

Retired Army Lieutenant General Patrick M. Hughes succinctly summed up the implications of operating in complex terrain: “It is dam (*sic*)

hard to find a vacant lot to hold a war in...and in this new era of warfare, that's the last thing the enemy wants anyway."⁷ Additionally, superiority in the other domains does not simplify the demands that land places on ground forces.

Operations in Afghanistan, both now and during occupation by the Soviet Union, show the effects of complex terrain. The absence of roads and the mountainous terrain make helicopters important in movement of forces, medical evacuation, and resupply. However, the weather and terrain (cool and thin air at high altitudes affecting lift) also make flying helicopters much more difficult than in Iraq (hot air at low altitudes with good lift).⁸

The continued global trend toward urbanization means that dense urban terrain is a likely future operational environment. "In the future," Army Chief of Staff General Mark Milley noted in October 2016, "I can say with very high degrees of confidence, the American Army is probably going to be fighting in urban areas."⁹ While dense urban terrain can affect all of the domains, it creates particularly difficult challenges for land forces, as recent U.S. experiences in Mogadishu, Fallujah, Baghdad, and Mosul demonstrate.

Dense urban areas enable an adversary to hide—both physically and among the population—move unobserved, and achieve positions of advantage over friendly forces. Dense urban terrain occludes target acquisition by reducing targetable signatures and target exposure times. Beyond slowing the advance of ground forces, urban areas have a canalizing effect on mobility that not only affects approach speed, but significantly increases the risk to maneuver elements. It slows ground operations and often involves clearing buildings one by one, putting friendly ground forces at risk. Subterranean features like subways and sewer tunnels, multistory buildings, and "urban canyons" only further complicate operations in cities, as experienced by Germany in Stalingrad during World War II and by Russia in Grozny during its Chechen Wars.¹⁰

Weather. Weather, notoriously unpredictable and ever changing, can conspire with terrain to complicate the inherent challenges of land domain operations. Weather can impede the ability

to employ maritime and air domain capabilities in support of ground operations and can make ground maneuver difficult. A sandstorm caused a pause in ground maneuver during the coalition drive to Baghdad in 2003.¹¹ Furthermore, as the Germans realized during Operation Barbarossa, winter in Russia can be a formidable adversary. Weather and tides were critical decision points for the invasion of Normandy in June 1944 and Incheon in September 1950. Bad weather enabled the German offensive in the Ardennes in late 1944 by grounding Allied air support.

Fog, rain, dust storms, sandstorms, and darkness can affect the ability to see the enemy and employ air support and can limit the effective range of weapons that require line of sight to the target. In addition, cold and heat can affect the performance of soldiers and increase logistical demands: Hot weather, for example, increases the demand for water.

Opportunities and Challenges. The principal opportunity that land forces offer is the ability to impose a decision on adversaries that the other domains cannot: taking and holding ground, destroying enemy forces in detail, and controlling and protecting populations. Many of the types of military operations required by U.S. policy and joint doctrine shown in Table 1 can be accomplished, in whole or in part, only with elements operating in the land domain.

Politically and strategically, operations in the land domain signal U.S. commitment because land forces, once deployed, can be difficult to extract. They are there for the duration. Ground forces are also essential for deterrence, even in relatively small numbers. As Charles Krauthammer has noted:

Today we have 28,000 troops in South Korea... Why? Not to repel an invasion. They couldn't. They're not strong enough. To put it very coldly, they're there to die. They're a deliberate message to the enemy that if you invade our ally you will have to kill a lot of Americans first. Which will galvanize us into a full-scale war against you.¹²

At the tactical and operational levels, the physical qualities of the land domain can

TABLE 1

Examples of Military Operations and Activities

- | | | |
|--|--|--------------------------|
| • Stability activities | • Countering weapons of mass destruction | • Counterinsurgency |
| • Defense support of civil authorities | • Chemical, biological, radiological, and nuclear response | • Homeland defense |
| • Foreign humanitarian assistance | • Foreign internal defense | • Mass atrocity response |
| • Recovery | • Counter-drug operations | • Security cooperation |
| • Noncombatant evacuation | • Combating terrorism | • Military engagement |
| • Peace operations | | |

SOURCE: U.S. Department of Defense, Joint Chiefs of Staff, “Joint Operations, Joint Publication 3-0,” January 17, 2017, p. V-2, http://www.dtic.mil/doctrine/new_pubs/jp3_0.pdf (accessed August 14, 2017).

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provide opportunities that other domains do not, such as physical protection. Adversaries and friendly forces can hide from observation and avoid accurate attack from the other domains, particularly the air domain. Fortifications, foxholes, barriers, gullies, subways, buildings, etc. all provide the ability to avoid the effects of enemy weapons. There are no foxholes in the sky.¹³

This was the case in the 2006 Lebanon War, when Hezbollah hid rockets and other systems in forested areas and in bunkers to avoid detection by and attack from Israel’s air force. Similarly, the Islamic State (ISIS) went to ground in Mosul, using congested, dense urban areas and hiding among the people to avoid destruction from the air and to force Iraqi ground forces to clear the city block by block. The Germans used the “impassable” Ardennes Forest to marshal forces for their attack and achieved surprise over Allied forces. Similarly, the North Vietnamese used the cover of thick jungles to move troops and supplies into South Vietnam throughout the Vietnam War, despite U.S. air supremacy.

The land can also be used to conceal hazards like mines, booby traps, and obstacles that impede movement. There are also other inherent advantages for land forces in comparison with forces from other domains because they can:

- Counter adversary maneuver and protect against adversary special operations forces (SOF) activities;
- Build partner capacity by training and advising;
- Operate more easily without the highly “nodal” structures of air and maritime forces;
- Harden, conceal, and disperse their capabilities;
- Network with terrestrial links (e.g., buried fiber optics) that are hard to access and disrupt;
- Stockpile relatively large amounts of ammunition that can be protected;
- Reload, resupply, and refuel in theater and away from large, vulnerable bases;
- Maneuver in the absence of overhead intelligence, surveillance, and reconnaissance (ISR) and global positioning system data with analog systems and target enemy forces; and
- Enable operation in the other domains from ground positions (e.g., counter integrated air defense fires).
- Maneuver on the land and take advantage of terrain;

These advantages, however, are not without their challenges. The forces and capabilities have to be in place on the ground with sufficient capacity to turn the land force element into more than a speed-bump deterrent. Furthermore, as noted, the land domain's principal challenges are posed by its inherent nature. Movement, the sustainment of forces, protection from the elements—and the adversary—all make land operations different from those in the other domains.

The nature of operations on land, shaped by the ability of land forces to traverse expanses of varied terrain quickly, makes the positioning of forces a critical matter. Being close to an expected area of action confers important advantages over a competitor who is farther away. Consider the physical posture of U.S. forces in Europe just three decades ago. During the Cold War, U.S. ground forces were essentially toe-to-toe with the Warsaw Pact along the German border, with substantial forces prepared to reinforce from the United States. Since the end of the Cold War, U.S. ground forces have been based mostly in the Continental United States. The difference between U.S. levels in Europe toward the end of the Cold War and those maintained there today are startling.

Until the resurgence of Russia, a reduced posture seemed adequate to protect U.S. interests while minimizing the costs of overseas bases. The current U.S. posture in NATO, however, is now problematic, particularly in Eastern Europe in the face of recent Russian adventurism.

The Baltic States, made members of NATO in its post-Cold War expansion, are vulnerable with little U.S. or NATO presence to provide a deterrent. The lone rotational U.S. Army armored brigade combat team in Poland and the Baltics is the only capability on the ground to deter Russia, aside from the modest Polish and Baltic State defense forces. War games held by a variety of organizations have repeatedly demonstrated that Russian forces could likely reach the outskirts of Baltic capital cities in 60 hours or less, leaving U.S. and allied forces little time to deploy.¹⁴ Although the armed forces of

the Russian Federation are much smaller than those maintained by the Soviet Union during the Cold War, they are physically located on NATO's eastern flank. Today, the two permanently stationed U.S. brigades, neither of which is armored, are distant from the Baltics in Germany and Italy. Geography alone thus suggests a high probability that the Russians could rapidly present NATO with a *fait accompli* if they chose to invade the Baltics.

Restoring a credible deterrent in Europe is an expensive proposition. It would require stationing more forces in Europe (particularly in NATO's frontline states), negotiating basing rights, establishing prepositioned equipment sets in sufficient quantities, and a host of other tasks to convince the Russians that military aggression is not a good option while restoring Allied confidence in American resolve. Detering in Eastern Europe is different from defending along the German border during the Cold War. The distance from the United States is greater, and reinforcements would have to come across land from Western Europe or risk attempting to arrive by air or sea under a formidable Russian anti-access/area-denial (A2/AD) complex that covers much of Eastern Europe and the Baltic Sea.

Today, U.S. forces deploy from bases at home to conduct operations globally, which include rotational forces in Afghanistan and Iraq and modest forward-stationed ground forces in South Korea and those already mentioned in Europe. This view that forces were better maintained at home but kept available for global deployment was a logical consequence of the collapse of the Soviet Union. It was further buttressed by the conclusion that China's military rise was principally a challenge for the air, maritime, space, and cyber domains, even though ground forces could contribute with maneuver forces, SOF, long-range fires, and complementary capabilities in electronic warfare, cyber, and intelligence, reconnaissance, and surveillance (ISR).¹⁵

As important as the physical positioning of forces is the ability of those forces to win in battle, which depends in no small measure

on their technological edge when compared to the enemy's forces. Investments in ground force modernization are urgently required to reverse the situation described by Lieutenant General H. R. McMaster in testimony before Congress in 2016: "We are outranged and outgunned by many potential adversaries."¹⁶ After a decade of relative peace followed by 15 years of counterinsurgency operations, modernization of U.S. Army capabilities for high-end conventional combat has repeatedly been shelved in favor of other priorities.

The Nature of Adversaries and Implications for Operations

The characteristics of the adversary, like terrain, create an inherent complexity that determines what can be done, what cannot be done, and the difficulty of the operation. As the old saying goes, the enemy always gets a vote.

Understanding enemy strengths, capabilities, locations, activities, and possible courses of action are key questions for commanders to understand as they frame their own plans.¹⁷ What has become increasingly apparent since the 2006 Lebanon War is that there are three broad categories of adversaries that the United States could confront in the future: non-state irregular, state-sponsored hybrid, and state forces.

Importantly, the nature of the enemy and his will to continue fighting often can be countered and defeated only by ground forces. Protracted air operations can be costly and eventually result in diminishing returns. Naval power has little, if any, ability to overturn enemy seizure or control of land. This is also true for cyber and space.

Non-State Irregular Adversaries. These are the main types of adversaries the United States has fought since 9/11, including the Taliban, al-Qaeda, and now the Islamic State. The Russians faced this type of adversary in the mujahedeen during the early stages of its Cold War-era war in Afghanistan, as did the Israelis during the intifadas in the West Bank and Gaza. These adversaries are generally

limited to small arms; rocket-propelled grenades (RPGs); improvised explosive devices (IEDs); and the occasional mortar, rocket, or man-portable air defense system (MANPADS). Their activity is limited primarily to operations in the land domain.

Operations to counter non-state/irregular forces often require large numbers of ground forces for protracted periods, as seen in Afghanistan and Iraq. The luster of rapid victories in Afghanistan (2001) and Iraq (2003) quickly faded as insurgencies grew in both countries. U.S. counterinsurgency doctrine demands forces on the ground to augment, train, and advise the supported government and its security forces until they can take the lead with less direct U.S. assistance, and operational demands can be significant:

Counterinsurgents can apply pressure on an insurgency by conducting raids on cell members; recovering enemy caches; interdicting supply routes; searching or seizing resources from cars, homes, and personnel entering the area of operations; isolating the insurgents from access to markets, smugglers, and black-market goods; and by conducting offensive operations that diminish guerrilla numbers.¹⁸

These activities, focused on protecting the population, require significant numbers of ground forces, as seen in the 2006 U.S. Army and Marine Corps counterinsurgency doctrine: "Twenty counterinsurgents per 1,000 residents is often considered the minimum troop density required for effective COIN operations; however as with any fixed ratio, such calculations remain very dependent upon the situation."¹⁹ The Surge in Iraq succeeded in large part because it "achieved a 50 per thousand ratio in Iraq, with 30 million people being protected by 600,000 counterinsurgents (160,000 coalition troops, 340,000 Iraqi security forces, and 100,000 Sons of Iraq)."²⁰

Conventional ground forces are augmented by special operations forces that "provide conventional forces with important cultural and advising capabilities. They also provide important offensive capabilities. SOF capable

of conducting direct action might be able to conduct raids and gain intelligence that conventional forces cannot execute.”²¹

Insurgents are often fixed in the close fight and defeated using direct and indirect fires (artillery and air strikes). Rarely is a U.S. platoon or larger formation at risk.²²

If the objective of U.S. policy is to change conditions on the ground in an enduring way, large numbers of ground forces are likely to be needed.²³ Nevertheless, over time, the goal is that most (eventually all) land forces will be indigenous, with U.S. land forces providing trainers and advisers and supporting the operations of local forces by employing enablers from the other domains. This transition is occurring now in Iraq in the fight against ISIS, and it is a major goal of the International Security Assistance Force in Afghanistan.

One of the most difficult aspects of countering an insurgency is maintaining the political will to endure the costs in blood and treasure of a protracted conflict. As that will fades, political restrictions on force levels and engagements may result, easing the pressure on insurgent groups. The burden on the counterinsurgent is that he must win, while the insurgent need only avoid losing to maintain influence.

State-Sponsored Hybrid Adversaries.

State-sponsored or other hybrid forces may reflect many of the attributes and behaviors of an insurgent force yet possess a significantly higher level of lethality and sophistication. Russian-backed separatists in Ukraine and Hezbollah represent two modern hybrid forces, and U.S.-backed anti-Soviet mujahedeen in Afghanistan were an early example.

The challenge posed by these adversaries is qualitatively different from the challenge posed by irregular opponents—similar to major combat operations but at a lower scale and with a mix of niche but sustainable high-end capabilities such as anti-tank guided missiles (ATGMs), MANPADS, and intermediate-range or long-range surface-to-surface rockets provided by a state actor that may allow hybrid forces to employ lethal force from greater range

and with greater survivability.²⁴ Hybrid adversaries not only attempt to hide from overhead ISR systems by using terrain or mixing with the civilian population, but also may seek to jam or otherwise counter key ISR capabilities directly.

Land forces, using combined arms maneuver, are required to make these adversaries visible and then defeat them in close combat augmented by indirect fires (artillery and air strikes). The United States has not fought adversaries approximating the hybrid capabilities of Hezbollah or the Ukrainian separatists since it confronted North Vietnamese main force units during the Vietnam War. These types of adversaries can also inflict substantial casualties, as seen in the destruction of Ukrainian battalions by separatist rocket fire.²⁵

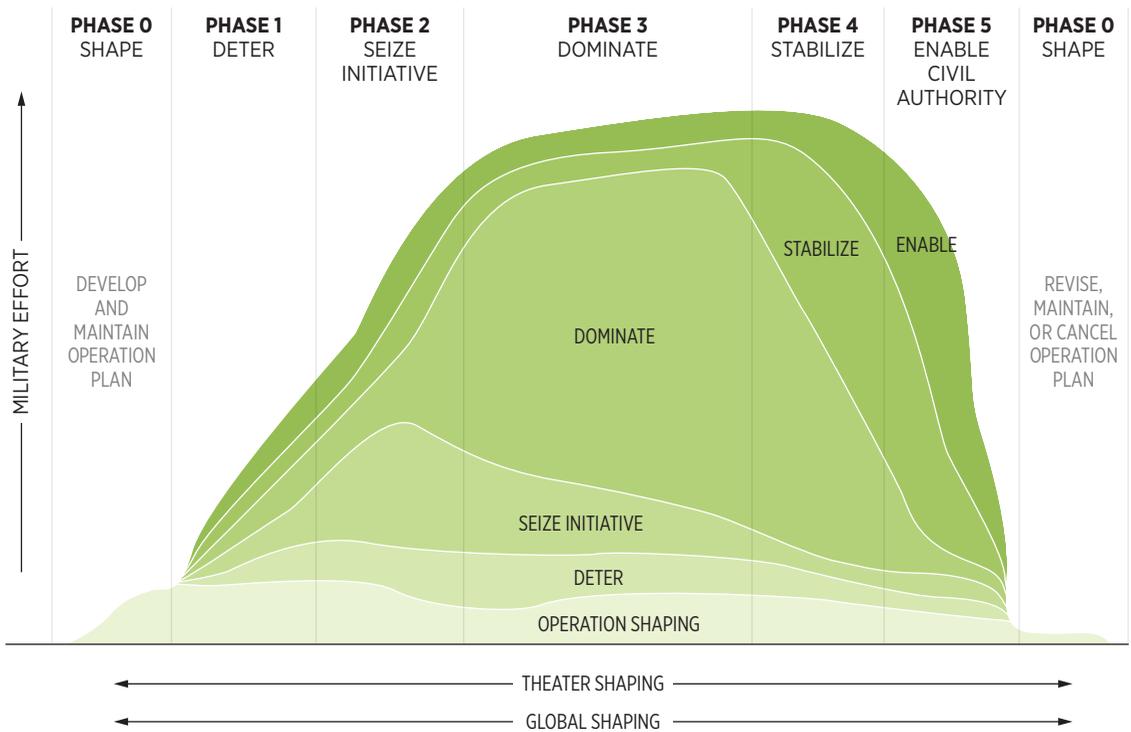
The U.S. military has not suffered mass casualties of the kind these systems could impose since the Korean War, and the U.S. Army, in particular, is increasingly aware that it needs new capabilities (e.g., active protection for combat vehicles against RPGs and ATGMs) to operate against state-sponsored hybrid adversaries. As Acting Secretary of the Army Patrick J. Murphy and Army Chief of Staff General Mark A. Milley acknowledged in their 2017 posture statement, “While we are deliberately choosing to delay several modernization efforts, we request Congressional support of our prioritized modernization programs to ensure the Army retains the necessary capabilities to deter and if necessary, defeat an act of aggression by a near-peer.”²⁶

Beyond military capabilities, hybrid adversaries may also enjoy political advantages that make wholly defeating them difficult. Hybrid forces may have cross-border sources of supply that are difficult to interdict. Further, they may enjoy the support of the local populace, as Hezbollah does in Lebanon. If they are seen as the legitimate government or at least as a strong political actor, their defeat could be regionally destabilizing.

State Adversaries. Events in Ukraine, Syria, and the Pacific have drawn U.S. attention once more to high-end state adversaries (Russia, China, North Korea, and Iran) that have capabilities ranging from small arms to

FIGURE 1

Phasing an Operation Based on Predominant Military Activities



NOTE: Figure is illustrative only.

SOURCE: U.S. Department of Defense, Joint Chiefs of Staff, “Joint Operations, Joint Publication 3-0,” January 17, 2017, p. V-13, http://www.dtic.mil/doctrine/new_pubs/jp3_0.pdf (accessed August 14, 2017).

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nuclear weapons. They have long studied U.S. capabilities and are modernizing their militaries to contest the United States across all domains, seeking in particular to undermine the advantages that the U.S. military has enjoyed since Operation Desert Storm, including but not limited to uncontested use of close-in air bases and logistics facilities, overhead and/or persistent ISR, and relatively unprotected, high-bandwidth communications.

Again, the Russians present a particularly difficult challenge because of their proximity to Eastern European NATO members, the lack of NATO forces on the ground in Eastern Europe, and the comparatively small militaries of the NATO frontline states. As noted, this

situation is different from the U.S. speed bump in South Korea, where substantial Republic of Korea forces deter North Korean action. Although land forces in the Pacific can make contributions in many areas, they are central to deterring Russian activity in NATO. This will require forward-positioned land forces that are large enough and capable enough to convince Russia that the game is not worth the candle—a case not made clearly in Georgia, Ukraine, and Syria.

Old Concepts and Better Adversaries

Complicating deterrence demands in Eastern Europe and the Pacific is the advent of a tough, layered A2/AD environment designed

to thwart U.S. operations.²⁷ This challenges the long-standing U.S. operational phasing model shown in Figure 1.

What is important in this figure is the requirement for a steady increase of military effort during Phase I (deter) and Phase II (seize the initiative) before reaching Phase III (dominate). In large-scale operations since the end of the Cold War, Phase II and Phase III have required moving the majority of forces, particularly land forces and their sustainment, from the Continental United States (CONUS) to the theater of operations.

Operations Desert Shield and Desert Storm are good examples of how the United States has employed this phasing construct since the end of the Cold War. While the President and the executive branch of the U.S. government worked to establish coalitions, basing rights, and other agreements, the Department of Defense began to move forces forward to deter Saddam Hussein from attacking Saudi Arabia. This involved activity across the domains, with significant air and maritime components rushing to theater and a quickly deployable buffer force on the ground, initially provided by the rapidly deployable 82nd Airborne Division, backed by overwhelming U.S. superiority in all other domains.

Over the next five months, the U.S. coalition built up sufficient forces and sustainment capacity to seize the military initiative and then dominate in air and ground offensive operations against the Iraqi force occupying Kuwait. What is extremely important from this example—and from the initial operations in virtually all large-scale U.S. operations since World War II—is the fact that the United States initially had unchallenged supremacy in all but the land domain, and this dominance enabled a sanctuary for the buildup of forces sufficient to win in Phase III.

This will not be the case against near-peer regional adversaries. U.S. abilities to project power into their regions or steadily build up combat power and sustainment capacity will be confronted by formidable A2/AD capabilities that could interdict reinforcements as

they close on the conflict zone. Thus, there is likely to be greater emphasis in the future on having greater combat power forward not just for deterrence, but to also conduct the initial stages of a conflict while the joint force seeks to regain freedom of maneuver, an arduous process of methodically degrading or defeating the enemy's efforts to impede U.S. operations.

This rising challenge of reinforcement stems from the emergence and adoption of new technologies across all domains that are contesting U.S. capabilities to deploy and operate. Secretary of Defense James Mattis testified in June before the House Armed Services Committee that:

For decades, the United States enjoyed uncontested or dominant superiority in every operating domain or realm. We could generally deploy our forces when we wanted, assemble them where we wanted, and operate how we wanted. Today, every operating domain is contested.²⁸

Furthermore, getting to the operational area is only half of the problem; operating there will also be heavily contested. In his written testimony, Secretary Mattis elaborated, noting that “the introduction of long-range air-to-surface and surface-to-surface guided weapons, advanced armored vehicles and anti-tank weapons, and tactical electronic warfare systems” threatens U.S. dominance on land.²⁹

General Joseph Dunford, Chairman of the Joint Chiefs of Staff, shares Mattis's concern, testifying in the same session that “[i]n just a few years, if we don't change our trajectory, we will lose our qualitative and quantitative competitive advantage.” He also said that the Budget Control Act denies the U.S. military the “sustained, sufficient and predictable funding” that it needs. If this situation is not rectified, Dunford warned, the United States will lose “our ability to project power,” and the U.S. military will be “much smaller” or “a hollow force.”³⁰ The Army's *Future Force Development Strategy* sums up what this means for a service whose role is sustained land combat:

The Army faces the triple effect of a reduced force combined with an aging combat fleet and a severe reduction of research and development spending. This reduction comes just as revisionist powers are aggressively challenging the world order and modernizing their own militaries. Modernization resources are close to historic lows since 1945. The Army requires resources in order to maintain tactical overmatch.³¹

Thus, there is an urgent need for new concepts and capabilities across the U.S. armed forces that can be used to solve the access challenge. For land forces, these concepts and modernization initiatives will need to assist the U.S. Army and Marine Corps to operate and win in increasingly contested land environments while under threat from combined arms fires that include missile, air, and other potential challenges.

Air and naval forces can mitigate the access challenges posed by increasingly capable competitors, but only to the extent that they can get enemy targets within range of the weapons they carry (increasingly a problem for naval forces in particular) and sustain an effective posture overhead (a growing problem for air forces). Thus, the Army must have better organic capabilities that are relevant to conducting land warfare in the modern age. To improve warfighting capabilities for these future battlefields, the Army has established modernization priorities to close the capability gaps that U.S. land forces face against capable adversaries:

1. Air and Missile Defense (SHORAD, short-range air defense);
2. Long-Range Fires such as improvements to multiple launch rockets systems (MLRS) and advanced weapons like the Army Tactical Missile System (ATACMS);
3. Munitions;
4. Mobility, Lethality, and Protection of brigade combat teams (BCTs);
5. Active Protection Systems, Air and Ground;
6. Assured position, navigation, and timing (PNT);
7. Electronic Warfare/Signals Intelligence;
8. Cyber (offensive and defensive);
9. Assured Communications (i.e., protected from enemy compromise or denial); and
10. Vertical lift (e.g., next-generation helicopters or tiltrotor aircraft).³²

Together, these capability areas will help to improve Army resiliency in the event joint control of other enabling domains is disrupted. Further, they would provide the Army (and the Marine Corps) with the ability to impose cross-domain effects on an adversary in support of joint operations, such as through ground-based counter-air and electromagnetic warfare systems. As air and naval forces can enable land operations, so too can land forces facilitate operations in other domains by leveraging their ability to bring “fires” to bear against targets that threaten platforms and forces operating in the air and naval domains. It is not enough just to develop next-generation systems, however. The Army and Marine Corps must integrate these capabilities together in functional warfighting concepts, exercise those concepts, and then prepare to fight that way in the field.

How Are the Domain and Related Warfare Concepts Changing?

The resurgence of Russia has brought the role of land operations to the fore again, back to the war Fehrenbach described in *This Kind of War*, which highlighted the centrality of the land domain and the need to put boots (and fires, electronic warfare, and other land-based capabilities) on the ground to achieve policy objectives and enable success in the other domains:

Americans in 1950 rediscovered something that since Hiroshima they had forgotten: you may fly over a land forever; you may bomb it, atomize it, pulverize it and wipe it clean of life—but if you desire to defend it, protect it, and keep it for civilization, you must do this on the ground, the way the Roman legions did, by putting your young men into the mud.³³

Technology and special operations forces will not provide universal solutions. These are the central points that make land forces a key component of a force that deters adversaries, as U.S. ground forces have done on the Korean Peninsula since the Korean War and did in NATO during the Cold War. Ground forces are also important to compel adversaries if deterrence fails; Operation Desert Storm accomplished this by physically forcing Iraqi forces out of Kuwait.

Arguments abound that dominance in new domains—airpower following World War II or cyber today—can render land power all but obsolete by deterring or defeating adversaries or at least sufficiently degrading their capabilities to the point that they are no longer a significant threat to the interests of the United States or its partners. The protracted aftermaths of the initial “victories” in Afghanistan and Iraq, both states with only limited capabilities to contest U.S. operations in other domains, have not yet put these arguments to rest, despite the difficulty with which the United States pursued its policy objectives. Possible future conflicts with peer competitors, who will possess far more sophisticated domain-denial capabilities, will likely bear little resemblance to recent U.S. warfighting experiences and reflect the difficulties of achieving victories through a single dominant domain.

Additional arguments similar to those extolling the primacy of technology have risen in the post-9/11 world as the United States has begun to rely on relatively small numbers of highly trained special operations forces in its fight against disparate insurgent and terrorist organizations. Special forces have enormous utility because they can direct precision attacks by air and maritime forces and can also

conduct precision raids to kill or capture high-value targets. Both special forces and small detachments of conventional ground forces can deploy to train and advise partner forces and enable their use of our capabilities without becoming directly engaged in combat themselves. Yet special forces cannot hold terrain against determined adversaries and cannot retake land seized through acts of aggression.

Thus, an assessment of the continued relationship between ground forces and the attainment of U.S. policy objectives is fundamental to understanding the full portfolio of capabilities and capacities that the United States will likely require in the future. Land forces will continue to be a vital part of future conflicts, whether they are the supported element of a principally land-based war or serve as an enabling force assisting other elements to retake control of the skies and seas of a littoral conflict. Many elements of military competition in the 21st century will be defined by air, naval, and cyber forces, but the fate of lands and peoples will continue to be determined principally by the staying power of land forces.

The Nature of the Competition

The global military challenges that confront the United States are evolving, and they are doing so in different ways. Managing these disparate challenges will be an added complication for the joint force. Today, just as Japan and Nazi Germany represented unique challenges in the 1930s and 1940s, a rising China and resurgent Russia pose problems that are dramatically different from anything else that the United States has faced since the end of the Cold War. Coupled with these near-peer competitors are the continued challenges posed by North Korea, Iran, turmoil in the Middle East, and global terrorism.

Concepts and capabilities that work in one setting and the mix of land with other forms of military power may have little relevance in other settings. What is clear is that capabilities that put the joint force at risk against even

mid-tier competitors are proliferating. The need for force modernization to restore overmatch in the land domain is urgent. Also needed are new concepts for how to employ these modernized forces—with the understanding that what might work against one adversary might not work against another.

Understanding the problem is the first step in developing solutions. In the land domain, as already discussed, distance, terrain, weather, and the nature of our adversaries combine to create complex problems that often only land forces can solve.

In the *2017 Index of U.S. Military Strength*, Antulio Echevarria discussed the central importance of and challenges involved in crafting new operational concepts to “provide a way to convert military strength into military power: the ability to employ military force where and when we want to employ it.”³⁴ While noting the success of some U.S. concepts like AirLand Battle, he highlights the failure of Effects-Based Operations and the incomplete nature of Air-Sea Battle.³⁵ What all of these concepts share is that they began as a way U.S. forces wanted to fight and then later evolved into general-purpose solutions for confronting any adversary.

The recently published Army–Marine Corps white paper “Multi-Domain Battle: Combined Arms for the 21st Century” recognizes the military problem that the current and future operating environments pose for the United States across the domains: “U.S. ground combat forces, operating as part of a joint, interorganizational, and multinational teams [*sic*], are currently not sufficiently trained, organized, equipped, nor postured to deter or defeat highly capable peer enemies to win in future war.”³⁶ The paper also includes a “Solution synopsis”:

*Multi-Domain Battle: Combined Arms for the 21st Century requires ready and resilient Army and Marine Corps combat forces capable of outmaneuvering adversaries physically and cognitively through the extension of combined arms across all domains.... Through credible forward presence and resilient battle formations, future Army and Marine Corps forces integrate and synchronize capabilities as part of a joint team to create temporary windows of superiority across multiple domains and throughout the depth of the battlefield in order to seize, retain, and exploit the initiative; defeat enemies; and achieve military objectives.*³⁷

While a good starting point, however, the Multi-Domain Battle concept is just the beginning. Much work remains to be done as the United States is now in a competition for the first time since the Cold War with adversaries who can challenge, and perhaps defeat, America’s armed forces in their local regions.

Conclusion

For the first time since the 1940s, the United States faces the prospect of peer competitors in the Pacific and Europe that can challenge U.S. capabilities in their regions. Coupled with these high-end adversaries are other actors, ranging from rogue states (North Korea and Iran) to hybrid adversaries (Hezbollah) to irregular terrorist threats (al-Qaeda, the Taliban, and ISIS). In this evolving security environment, the land domain will be particularly important both in crafting concepts and capabilities to support U.S. deterrence regimes and in defeating America’s enemies if deterrence fails.

Time and current resourcing levels, however, are not on our side. If the United States does not approach these challenges with the urgency required, it will forfeit its credibility as a great power.

Endnotes

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