The Challenges of the "Now" and Their Implications for the U.S. Army

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The U.S. Army has been at war in Afghanistan and Iraq almost continuously for more than a decade—an experience that has, over time, honed the Army's ability to fight irregular adversaries. Ironically, in the aftermath of these wars and despite such capabilities, the Army finds itself in a crisis of relevance, with the national strategy having changed with the "rebalance" to the Pacific, with end strength and budgets shrinking, and with U.S. policymakers averse to putting "boots on the ground" even as the Islamic State has again thrown Iraq into war (Johnson, 2015b, pp. 109–113).

This crisis of relevance reflects a somewhat understandable but recurring Army pattern of focusing intently on a current conflict while ignoring potential ones. As an example, after the United States emerged from Vietnam, it witnessed the events of the 1973 Yom Kippur War—a state-level conflict fought against Israel by a coalition of Arab states led by Egypt and Syria—which underscored how far potential enemies had advanced in terms of weapons and tactics. This war vividly illustrated the lethality of modern weapons, the high value of crew proficiency, and the skill of tactical commanders (Herbert, 1988, pp. 29–36; Scales, Johnson, and Odom, 1993, pp. 9–10; Romjue and Mullen, undated, pp. 190–191).

The Army responded with a renewed focus on major combat operations. It developed, procured, and fielded the "Big 5" weapon systems—Abrams main battle tank, Bradley fighting vehicle, Apache helicopter, Black Hawk helicopter, and Patriot air defense missile system—as well as other effective weapons, such as the Multiple Launch Rocket System (MLRS) and the Army Tactical Missile System. These weapon systems were accompanied by the development of AirLand Battle doctrine and a training revolution typified by unit rotations at the National Training Center (Scales, Johnson, and Odom, 1993, pp. 10–20; see also Trybula, 2012).

The combination of doctrine, training, and new weapon systems produced an efficient and lethal combat force, as Operation Desert Storm and initial combat operations in Operation Iraqi Freedom (OIF) showed. But the focus was on state-level conflict. These operations therefore did not prepare the Army for the full range of operations it has been called on to support (Johnson, 2014).

This perspective reviews the spectrum of operations the nation faces; how it has adapted to the irregular challenge it has faced and the consequences of that adaptation; and recent conflicts, such as Israel in Lebanon and Gaza (2006) and the ongoing conflicts in the Ukraine, Syria, and Iraq. The aim here is not so much to learn about the current conflicts but more to help understand battles the United States has not yet fought but likely will in the future—to learn how to address the recurring Army pattern of focusing intently on a current conflict while ignoring potential ones.

In a nutshell, this review reveals that potential challenges to U.S. ground forces in future conflicts are indeed formidable. Key challenges include the following:

- Partly because of the recent and current focus on irregular operations in Iraq and Afghanistan, we are unprepared to deal with state-sponsored hybrid and state operations that fall at the other end of the spectrum of operations.
- Our potential opponents are competent, experienced adversaries, especially in the middle and high ends of the spectrum of operations.
- Such opponents employ weapons that can defeat our primary combat vehicles and put our formations at risk, and these opponents are developing better ones.

The Spectrum of Operations

The United States may face three broad categories of adversaries in the future: irregular, state-sponsored hybrid, and state. Figure 1 shows some past and current examples at the top and distinguishing characteristics of the categories on the bottom. These are not the same types of adversaries, principally because of their different capability thresholds.

Nonstate irregular forces typically are not well trained, have little formal discipline, and typically operate in small formations about the size of squads. Their weapons are small arms, rocket-propelled grenades (RPGs), mortars, short-range rockets, and improvised explosive devices (IEDs) or mines. They operate under decentralized command and control through cell phones or runners.

Middle adversaries are essentially state-sponsored hybrid forces characterized by capabilities on both ends of the spectrum. Thus, they have the same sorts of weapons that irregular forces have but have additional capabilities, such as antitank guided missiles (ATGMs) and man-portable air defense weapons (MANPADs) and longer range, larger caliber rockets.[1] They employ multiple means of command and control but generally operate in a decentralized fashion (Johnson, 2011, pp. 151–163).

High-end adversaries are the forces of a nation state. They are hierarchically organized forces, ranging from battalion to brigade and larger formations. Their weapons span the spectrum of sophisticated weaponry, including air defenses; ballistic missiles; conventional ground and special operations forces; air and naval forces; and, in some cases, nuclear weapons. Command and control are exercised through all means and are generally centralized. They also have long-range fires; sophisticated anti-access and area denial

Figure 1. The Range of Adversaries U.S. May Face Across the Spectrum of Operations

- Mujahideen (Afghanistan 1979)
- Palestine Liberation Organization West Bank (2001)
- Al-Qaeda in Iraq (2007)
- Taliban Afghanistan (2009)

Nonstate irregular

- *Organization*: Not well trained, little formal discipline, cellular structure, small formations (squads)
- *Weapons*: Small arms, RPGs, mortars, short-range rockets, IEDs/mines
- *Command and control*: Cell phones, runners, decentralized

- Mujahideen Afghanistan (1988)
- Chechnya (1990)
- Hezbollah Lebanon (2006)
- Hamas Gaza (2008)
- Islamic State (now)
- Ukrainian separatists (now)

State-sponsored hybrid

- *Organization*: Moderately trained, disciplined, moderate-sized formations (up to battalion)
- *Weapons*: Same as irregular but with standoff capabilities (ATGMs, MANPADs, longer-range rockets)
- *Command and control*: Multiple means, decentralized

- Soviet Union (in Afghanistan 1970s–1980s)
- Russia (Chechnya 1990s)
- Israel (Lebanon 2006)
- Georgia (2008)
- Russia (Georgia 2008)
- Israel (Gaza 2008)
- United States (Afghanistan and Iraq 2010)

State

- *Organization*: Hierarchical, brigade or larger-sized formations
- *Weapons*: Sophisticated air defenses, ballistic missiles, conventional ground forces, special operations forces, air forces, navies, some with nuclear weapons
- *Command and control*: All means, generally centralized

SOURCE: Adapted from Johnson, 2011, p. xxii.

capabilities; and intelligence, surveillance, and reconnaissance capabilities (Johnson, 2011, pp. 163–168).

The U.S. military, particularly the Army, has been deeply engaged for more than a decade in the irregular wars in Iraq and Afghanistan. As discussed later in detail, the U.S. military has made significant adaptations to address these types of adversaries. During the same time, Russia and China have been developing military capabilities designed to overmatch the United States and, in particular, to challenge U.S. forces attempting to project power into spaces Russia and China consider their privileged domains. While the United States may not fight Russia or China directly as state adversaries, it will surely face their military capabilities in the future, particularly among state-sponsored hybrid adversaries.

Adapting to the Irregular Challenge and the Consequences of Doing So

As mentioned above, since the 9/11 attacks, the focus of the U.S. Army has shifted from the state adversary to the low end of the spectrum of operations, where we have faced nonstate irregular forces. Such U.S. foes include the Taliban and al-Qaeda in Iraq, as well as the Mujahideen in their early days in the fight against the Soviet Union (Johnson, 2011, p. xxii).

The U.S. response to forces like these is to fix them in place and then employ direct and indirect fires to defeat them. Rarely is a platoon at risk, let alone a larger formation. One illustration of U.S. capabilities is the battle for Objective Peach in Iraq in 2003, during which a U.S. battalion took on the remnants of an Iraqi division and essentially destroyed it (Fontenot, Degen, and Tohn, 2004, pp. 294–295). Where U.S. forces became at risk—as was the case with platoons at combat outposts Wanat and Keating in Afghanistan—it was because of U.S. tactical failures (Inspector General, 2010; U.S. Central Command, undated).

As was true of the Israelis before the 2006 Lebanon War, the Army has become expert at fighting irregular adversaries. This adaptation has shaped the systems developed for land forces, including such systems as Mine-Resistant Ambush-Protected vehicles and up-armored High-Mobility Multipurpose Wheeled Vehicle (HMMWV) to protect soldiers against IEDs and the Counter Rocket, Artillery and Mortar System to deal with the relatively limited indirect fire threat. Command and control flow from large, networked headquarters that integrate and synchronize information from across the nation's resources (Johnson, Markel, and Shannon, 2013, pp. 49–58). The Army's operating procedures have come to depend on its units deploying to large in-place facilities.

The result of such operations as the 2008 Battle of Sadr City has been that brigade and higher headquarters, although highly capable against irregular adversaries, have morphed into large soft targets that take a long time to set up and emit large electromagnetic signatures. Such headquarters will become prime targets for enemies that have more-sophisticated capabilities than those we have been fighting. Experience at the National Training Center at Fort Irwin indicates that brigade combat team tactical operations

centers remain unwieldy. They are in tents that take a long time to set up and take even longer to establish key networks.[2]

The larger point is that the history of materiel development in the U.S. Army has shown a pattern of the military having to reinvent itself on the fly to meet the unanticipated demands of a new conflict (see Figure 2).

The recent focus on irregular adversaries in highly developed theaters of war has led us to tailor our equipment to that type of conflict, particularly in the area of force protection. This somewhat narrow focus raises the question of what type of equipment we will need to defeat future adversaries *across the spectrum* of likely conflicts. Although the Army has largely shifted its focus from specific irregular wars and counterinsurgency to expeditionary operations and decisive action, it is still equipped largely with major platforms developed and built in the 1970s and 1980s or with materiel developed for the irregular challenges of Iraq and Afghanistan.[3]

One unintended consequence of the new equipment is that many of the platforms are not suitable for an expeditionary army or for modern hybrid or state adversaries. The Stryker Infantry Carrier Vehicle, adopted by the Army partly because a C-130 aircraft could rapidly deploy it, had to be adapted to better survive against the RPG and IED threats in Iraq and Afghanistan. These modifications to the vehicle—slat armor and double-v hull—now bar it from using that air platform (Johnson, Grissom, and Oliker, 2008, p. 153). The HMMWV-mounted Common Remotely Operated Weapon Station, a weapon assigned to the 82nd Airborne Division, cannot be air dropped, which is a key requirement for equipment in the infantry battalions in that division.[4] The Mission Command on the Move Mine-Resistant Ambush-Protected vehicles in the 101st Airborne (Air Assault) Division cannot be transported by heli-

Figure 2. Pattern of Army Materiel Development

Vietnam	Conventional only against Soviet Union	→ Conventional and counterinsurgency against the Viet Cong and state-supported hybrid (North Vietnamese supported by Russia and China)
Post-Vietnam	Conventional and counterinsurgency	→ AirLand Battle to counter Soviet Union
Post–invasion of Iraq	AirLand Battle	→ Counterinsurgency in Iraq and Afghanistan
Post-Iraq and Afghanistan	Counterinsurgency	→ Decisive action against

copter to support air assault operations—the mission of that division.[5] None of these vehicles can survive against modern ATGMs or rocket- and artillery-delivered top-attack munitions.

Lessons from the 2006 Lebanon War and the Ongoing Wars in the Ukraine, Syria, and Iraq

Several recent conflicts offer important lessons for the type of enemy the U.S. military is likely to confront in the future: the 2006 Lebanon War between Israel and Hezbollah and the ongoing conflicts in the Ukraine, Syria, and Iraq. These conflicts illustrate the middle and high ends of the spectrum of opponents discussed earlier.

The most challenging conflict would be one in which U.S. forces faced those of either China or Russia. But as noted earlier, while these are the most challenging conflicts, they are also not the most likely. Nevertheless, even if we do not end up in a conflict with those nations, any conflict we might engage in will almost surely find us confronting their weapon systems. We are vulnerable to these capabilities now, and these vulnerabilities need to be dealt with now to avoid operational and political surprise.

Lessons from the 2006 Lebanon War

The 2006 war between Hezbollah and Israel underscored how a nonstate irregular force can transform into a hybrid force if a state provides it with advanced weaponry. The conflict was precipitated by Hezbollah's kidnapping of Israel Defense Force (IDF) soldiers and the Israeli response. The IDF initially responded with fires, from both aircraft and artillery, and limited ground raids. This response *typified* past Israeli responses to irregular forces. But in

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this instance, the IDF was not fighting an irregular force. Hezbollah had evolved and, after years of planning and preparation, had become a state-sponsored hybrid adversary. It had some very capable weapons and had prepared them well for conflict with Israel (Johnson, 2011, pp. 45–94).

These weapons were difficult to find (especially from the air) and difficult to attack. Ground forces were required, in many cases, to find and destroy the weapons. Israel had to abandon its existing low-intensity combat approach, skills, mindsets, and materiel solutions. Defeating Hezbollah required a tightly integrated air-ground solution that the IDF could not execute in 2006. The challenge that a relatively small group of adversaries with good standoff weapons fighting in complex terrain presented stymied the traditional IDF approach. Israeli main battle tanks were highly vulnerable to these weapons:

> Forty-five per cent of the Israel Defence Force's (IDF's) MBTs [main battle tanks] hit by Hizbullah ATGMs during the fighting were penetrated. Out of 50 IDF Merkava Mk 2, 3 and 4 MBTs hit, 21 were penetrated. Eleven of the incidents resulted in no fatalities while 10 incidents resulted in 23 crew casualties. During the fighting, the IDF encountered a wide variety of Russian- and Iranian-made ATGMs, including the Kornet-E 9P133, claimed to be able to penetrate 1–1.2 m of armour

protected by ERA [explosive reactive armor]; the Metis-M 9M131, equipped with a tandem high-explosive anti-tank . . . warhead; the 9K113 Konkurs (AT-5 "Spandrel"); the 9K111 Fagot (AT-4 "Spigot") and the tandem warhead RPG-29 rocket-propelled grenade. (Ben-David, 2006)

The issue of scale also came into play. Southern Lebanon is approximately 45 by 45 km of complex terrain. The IDF committed at least four divisions to the conflict and still could not solve the problem (Johnson, 2011, pp. 54–78, 142–143). This is not unlike the challenge of having to clear 4,000 well-trained and hidden adversaries with ATGMs, MANPADs, rockets, and mines from the complex terrain between Fredericksburg and Woodbridge, Virginia, and extending 45 km to the west of the I-95 corridor.

Inadequate training was also an issue. This became painfully apparent once the IDF launched a ground assault. Israeli tank crews that were ambushed in the battle at Wadi Saluki in Lebanon did not know how to execute battle drills or screen with smoke. Crews also did not know how to set the headspace and timing on their .50 caliber machine guns, a key procedure in ensuring the proper function of that weapon needed for defensive fires. Battalion commanders had not trained their units on how to integrate heavy mortars and machine guns into their maneuver. The final days of the operation saw a poorly executed air assault in which a helicopter highlighted against the skyline made it an easy target that was shot down by an SA-7 MANPADs (Johnson, 2011, pp. 41, 75).[6]

The conflict was a wakeup call for Israel. It changed both equipment—Israel developed the Namer program, which produced much more heavily armored personnel carriers; bought more Merkava IV main battle tanks; and fielded the Trophy active protections system—and its doctrine and training emphasis from irregular to hybrid

adversaries. This focus on combined arms fire and maneuver and air-ground integration paid off in subsequent operations in the Gaza strip (Johnson, 2011, p. 98; Johnson, 2010, pp. 4–5).

The IDF had not thought about or prepared adequately for an enemy like Hezbollah. Their focus was locked on low-intensity conflict during the deadly Second al-Aqsa Intifada, during which suicide bombers attacked civilian targets inside Israel. This "created a misconception of what war is really like. . . . [A]t no stage [during the Second al-Aqsa Intifada] was an Israeli unit required to face down an enemy force of a size larger than an unskilled infantry squad" (Harel and Issacharoff, 2008, p. 45). Furthermore, the IDF developed a mindset that fighting this type of irregular adversary was training for war (Johnson, 2011, p. 19). Consequently, the Israeli ground forces paid little attention to combined arms training, armored unit training, or integrated operations with the air force because these were not deemed relevant to the fight the forces were in. These irregular adversaries are similar to the ones the U.S. Army has been fighting in Afghanistan and Iraq. But Hezbollah was not Intifada irregular terrorists. It was a competent, well-trained adversary that was armed with standoff weapons, supplied by the states of Iran and Syria, fighting from meticulously prepared and fortified positions (Johnson, 2011 p. 44–54).

Lessons from Ongoing Wars in the Ukraine, Syria, and Iraq

The types of weapons irregular forces carry can make a substantial difference in their capabilities. They also need training, but training without the weapons will not produce the same quality of force. The conflicts ongoing in Ukraine and in Syria and Iraq illustrate the point. But the Ukrainian conflict reflects a closer interaction between a state (Russia) and its proxy (Ukrainian separatists) and

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the use of weaponry that the United States has not confronted since the Cold War in theory and since the Vietnam War in practice.

The Ukraine conflict is particularly troublesome, given that it calls into question Russian intentions along its periphery, particularly in the Baltics—a concern because the Baltic States are North Atlantic Treaty Organization (NATO) members and also have significant minority populations of ethnic Russians (Larrabee, Wilson, and Gordon, 2015, p. 6). Concerns about future Russian actions in the region have spurred a reexamination of the defense of the Baltics and a growing recognition of the weaponry and other capabilities that the U.S. military could confront in the future (Ioffe, 2015). Russian military modernization reflects efforts to correct deficiencies exposed during the wars in Chechnya and Georgia (Masters, 2015). And the Russians have clearly demonstrated their capabilities in the Ukraine, as recently noted in the Army's new *Combat Vehicle Modernization Strategy:*

> In the aftermath of its annexation of Crimea in March 2014, Russian forces began supporting separatists in Eastern Ukraine with advanced weaponry, fire support, and special and conventional forces. This ongoing conflict offers important insights for the U.S. Army about the lethality of the modern battlefield;

lethality the U.S. Army has not faced since World War II. Russian and separatist forces are employing combined arms warfare with advanced weapons to devastating effect. Russian artillery, particularly rocket launchers with conventional, thermobaric, and cluster munitions—using unmanned aerial systems (UAS), both for target location and battle damage assessment—is particularly effective against Ukrainian light armor and infantry formations. Additionally, the Russians are using their most advanced tanks in the Ukraine, including the T-72B3, T-80, and T-90. All of these tanks have 125mm guns capable of firing a wide range of ammunition, including antitank/anti-helicopter missiles with a six-kilometer range, and advanced armor protection, including active protection on some models. Finally, the Russian air defense systems (man-portable and vehicle mounted) have made it all but suicidal for the Ukrainian Air Force to provide air support to ground forces. Thus, the battlefields of Eastern Ukraine are similar to those envisioned by the U.S. Army during the Cold War, but with more mature technologies. It is a battlefield that requires armor for maneuver. Light skinned vehicles, including BMP infantry fighting vehicles, have proven vulnerable to both artillery and tank fire. Dismounted infantry in defensive positions risks becoming fixed by fire and either isolated or overrun by maneuvering units supported by tanks. In short, the Ukrainian battlefield is a harbinger of the complex environment the U.S. Army will face in the future; a battlefield that requires mobile protected firepower, the integration of all arms, and counters to long-range artillery, UAS, air defenses, and tank protection systems. (Johnson, 2015a)

Russia is generally not supplying the Ukrainian separatists with its top-tier weapons, although the Russians have employed these higher-end systems themselves when necessary in their view to stave off Ukrainian success (Karber, 2015, pp. 11–13). In event of a direct confrontation between U.S. and NATO forces and Russia in the Baltics, the Russians have a significant capability edge, particularly given that they would be fighting in their own backyard. Key Russian capabilities include:

- a robust anti-access and area denial capability that includes advanced air defenses, ranging from the *Verba* MANPADs to the mobile *Pantsir* gun-missiles system to the 250- to 400-km range S-400 *Triumf* air defense system (Keck, 2015)
- a variety of multiple rocket launcher systems, including the relatively short-range TOS-1 220mm with thermobaric warheads that was used extensively in the wars with Chechnya (Grau and Smith, 2000), the BM-21 Grad 122mm multiple rocket launcher used in Ukraine on both sides, and the BM-30 300mm long-range multiple rocket launcher; the BM-30 in particular could present significant challenges because it outranges the U.S. Army's MLRS and M-142 High-Mobility Artillery Rocket System firing guided multiple launch rocket systems (Gordon et al., 2015, p. 29[7])
- electronic and cyberwarfare capabilities (Heickero, 2010[8])
- robust national and military intelligence services
- special forces (*Spetznaz*) in large numbers (brigades) (Larrabee, Wilson, and Gordon, 2015, pp. 6, 44)
- sophisticated naval and air force systems
- nuclear weapons (Sokov, 2014)
- advanced ground systems, including ATGMs, new armored systems with advanced reactive armor and (potentially) active protection, and tank and infantry fighting vehicle long-range cannon tube-launched missiles effective against vehicles and low-flying helicopters at ranges up to 8 km in some versions (Eshel, 2015; "Faster Than an Abrams . . . ," 2015).

Ironically, the Russians are also using their military in Syria to help keep the regime of Bashar al-Assad in power against rebels, given U.S. hybrid capabilities. A 2013 Central Intelligence Agency program is believed to have provided BGM-71 Tube-Launched, Optically Tracked, Wire-Guided missiles that were having a devastating effect on the Syrian Army:

> So successful have they been in driving rebel gains in northwestern Syria that rebels call the missile the "Assad Tamer," a play on the word Assad, which means lion. And in recent days they have been used with great success to slow the Russian-backed offensive aimed at recapturing ground from the rebels. (Sly, 2015[9])

The Syrian rebels are also asking for MANPADs to deal with Syrian and Russian air power, but "[t]he Obama administration has repeatedly vetoed past requests from the rebels, as well as their Turkish and Saudi allies, for the delivery of antiaircraft missiles, out of concerns that they could fall into extremist hands" (Sly, 2015). Similarly, the United States has refused to provide Ukraine with lethal weapons, e.g., Javelin ATGMs, capable of defeating Russian tanks for fear of escalation and widening the conflict (Crowley, 2015). There is reason for concern. When states become directly involved in proxy wars or increase their support to weaker client states, escalation is a distinct possibility. The recent shootdown of a Russian fighter by the Turkish Air Force is an ominous case in point. In the aftermath of the incident, the Russians announced that they were deploying S-400 air defense systems to Syria, which heightened the possibility of future state-on-state encounters, given that multiple nations are flying over Syria attacking the Islamic State (Hille, Raydan, and Noble, 2015).

The Islamic State also has significant military capabilities, mainly captured from the Syrians and Iraqis, including T-55, T-72, and M-1 tanks; a variety of MANPADs and ATGMs; artillery; ZU-23-2 antiaircraft guns; and Grad multiple rocket launchers (Bender, 2014). It is also able to purchase weapons and ammunition (Harte and Smith, 2014). This is not unlike how the Chechen rebels supplied themselves in the 1990s from stockpiles of Soviet equipment (Specter, 1996).

Moving Forward

The Need to "Mind the Middle"

All this suggests the U.S. Army needs to pay attention to adversaries in the "middle," that is, state-sponsored irregular forces. Such groups are important because they represent the type of adversary U.S. ground forces are likely to face. Furthermore, capabilities that work against middle-tier adversaries also buy the owner a decent start toward dealing with the high-end adversary, who will also use ATGMs and the like in large numbers. The number of state-sponsored irregular forces is growing, and they employ a strategy focused on causing large numbers of casualties over an extended period—one that Western nations find most difficult to counter.

Such forces often adopt tactics designed to avoid air and sensor advantages, as Hezbollah did with Israel in 2006 and as the Islamic State has done by concentrating in cities to hide among the population. These tactics offer a number of advantages. First, it is difficult to target such tactics. Second, they tend to offset the Western advantage in firepower, particularly air-delivered firepower. If a force employs the firepower and causes extensive casualties, the

enemy can exploit it for propaganda purposes. If the force does not use its firepower, the remaining option is to use ground forces in urban combat, which typically results in significant casualties. Thus, Western nations tend to be reluctant to put large numbers of troops on the ground. Finally, these adversaries are not necessarily insurgents, which means that U.S. counterinsurgency approaches may not be relevant to combating them.

Priorities for Combat Development

As has been indicated here, our combat development capabilities need to take into account the weapons that have been developed by our state competitors. We need credible military capabilities to deter them and to assure allies, and we must be prepared to fight and defeat weapons that may have deliberately or inadvertently fallen into the hands of state-sponsored hybrid actors. As the Israelis found out in Lebanon in 2006, forces trained for joint combined arms fire and maneuver are central to defeating state-sponsored hybrid adversaries. These capabilities have eroded in the U.S. military since 2003 and must be restored. Nevertheless, many of our capability gaps require materiel solutions. A short list of combat development priorities would include the following:

- mobile, protected firepower that has active protection against high-end ATGMs and RPGs[10]
- counterfire systems that can deal with long-range rockets[11]
- short-range air defenses to deal with enemy fixed- and rotary-wing aircraft
- systems to counter UASs and counterrocket defenses
- active protection systems that can defeat high-end MANPADs
- mobile, survivable tactical headquarters

- backup systems to the Global Positioning System for timing and location that can continue to operate in the presence of jamming
- cyber- and jam-proof communications
- signature management or reduction.

Final Thoughts

Our potential adversaries know our capabilities—and our vulnerabilities—and they are adapting. In some critical areas, we are overmatched now. We need to prepare for the full range of adversaries we are likely to confront, some of whom will be armed with weapons that are now superior to ours. Carl von Clausewitz emphasized the need to know what kind of war you are fighting. In this case, we need to know what kind of war we *could* be fighting. An important first step is to understand our capability gaps. Part of this effort must also involve educating a generation of soldiers who have known no adversary other than insurgents in Iraq and Afghanistan. This is the intellectual challenge that stands in the way of our recognizing our shortfalls.

This is not to say that the Army has been idle: *The Army Operating Concept* and the Army Warfighting Challenges address some aspects of the challenge (Training and Doctrine Command Pamphlet 525-3-1, 2014; Army Capabilities Integration Center, 2015). They can provide the framework for recognizing our shortfalls, shaping the analysis to determine how to overcome them, and developing technically and operationally feasible solutions. That said, we are behind, and we need to impart the same sense of urgency to developing capabilities to counter hybrid and state adversaries that we did during the wars in Iraq and Afghanistan to defeat insurgents. And we need to do it now.

Notes

[1] The Soviet-Afghan conflict showed how outside state assistance that provides standoff weapons can dramatically enhance the capabilities of irregular forces. The United States and other states did the same thing in Afghanistan, providing the Mujahideen with MANPADs, recoilless rifles, mortars, heavy machine guns, and rocket launchers. During its war in Afghanistan, Soviet combat equipment losses included "118 aircraft, 333 helicopters, 147 tanks, 1,314 armored personnel carriers, 433 artillery pieces and 11,369 cargo and fuel tanker trucks." Interestingly, the Soviets lost fewer helicopters—333—than the U.S. Army lost in Vietnam—5,086. Ultimately, the Mujahideen took away a key capability for the Soviets to conduct operations in a large country; guarding extensive lines of communications required 90,000 to 104,000 troops. Adding more troops would have only exacerbated the supply difficulties. On Soviet aircraft and other losses, see Nawroz, Yahya, and Grau, 1995. On U.S. Army helicopter (and the losses of fixed-wing aircraft and helicopters by the other U.S. services and countries during the war), see Roush, undated.

[2] Discussion with National Training Center personnel. See also Thome, 2012, which notes that the goal of the brigade was to be able to "get our assembly time down to at least six hours." See also Hoover, 2015, for images of a brigade tactical operations center.

[3] Training and Doctrine Command Pamphlet 525-3-1, 2014, p. 46, defines *expeditionary* as the "ability to deploy task-organized forces on short notice to austere locations, capable of conducting operations immediately upon arrival." See also Odierno, January 2012, in which General Odierno, early in his tenure, outlined his vision for the role of the Army:

> The purpose of the U.S. Army is to fight and win our Nation's wars. War-fighting is our primary mission. Everything that we do should be grounded in this fundamental principle. It is imperative that we be responsive to Combatant Commanders as part of the Joint Force. We do this by rapidly dominating any operational environment and providing decisive results across a full range of missions. . . . [T]he Army rapidly applies its combined arms capabilities to dominate the environment and win decisively.

[4] Discussions with 82nd Airborne Division personnel.

[5] Discussions with 101st Airborne (Air Assault) Division personnel.

[6] Also discussions with IDF officers.

[7] See also page 32, which details the types of warheads available to the BM-30, including four types of submunition warheads, two types of precision submunitions, antitank mines, fuel-air explosive parachute–retarded high explosive fragmentation, and hardened high explosives (earth penetrating).

[8] This report describes possible Russian cyber operations in 2007 against Estonia and in 2008 against Georgia. Many other sources discuss Russian cyber challenges.

[9] See also Barnard and Shoumali, 2015.

[10] The days when an armored vehicle could sustain a hit from an RPG have passed. It is not feasible simply to thicken the armor to withstand RPG attacks.

[11] The long-range rocket is a weapon of choice for state-sponsored hybrid forces. Our current counterfire systems do not have the range to deal with them. Thus, U.S. forces need a system that can find and destroy rocket launchers at ranges beyond 100 km.

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About This Perspective

More than a decade's worth of experience in Afghanistan and Iraq has honed the Army's ability to fight irregular adversaries, but these may not be the adversaries of the future. At the same time, the security landscape is changing in the face of a rising China, a resurgent Russia, and a Middle East in turmoil. This perspective reviews the military adversaries and challenges that this nation and others currently face and draws lessons for the battles the United States has not yet fought but likely will in the future, addressing the implications for the U.S. Army. It synthesizes published RAND work (David E. Johnson, 2011; Larrabee, Wilson, and Gordon, 2015; Gordon et al., 2015; Bonds, 2015a; Bonds, 2015b; Bonds, Johnson, and Steinberg, 2015).

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