



Civilians lead Afghan National Security Forces and ISAF to IED cache

# Evolved Irregular Threats

BY BEN FITZGERALD AND PIA WANЕК

**A**lmost every aspect of national security is colored by uncertainty. While it would be arrogant to consider that this moment in history carries more uncertainty than others, we presently find ourselves facing a multiplicity of uncertainties that pull us simultaneously in different directions. Drawdown in Iraq and Afghanistan, along with the future implications of those conflicts, the ongoing events of the Arab Spring, the rise and increased assertiveness of near-peer competitors, a variety of nonstate actors with increasingly sophisticated capability, and economic crises in Europe create additional contingencies that require our attention. Simultaneously, economic uncertainty at home limits our means, requiring prioritization and the acceptance of additional risk.

Analysis of trends in the operating environment and among threat groups affords national security professionals an opportunity to think more broadly in a step back from specific contingencies. A broader analysis can inform capability decisions in an effort to build a force capable of appropriately addressing as wide a range of contingencies as possible.

The U.S. national security community is traditionally most comfortable preparing for threats emanating from near-peer competitors. This is both appropriate and important to maintain given the capability of these actors. However, a singular focus on these potential threats may leave us open to surprise from seemingly low-level threats, stymieing our ability to project power and achieve national security objectives. This article investigates the significance of a specific aspect of the future operating environment—the urban, littoral environment—and the most likely adversaries operating therein—advanced nonstate actors posing evolved, irregular threats.<sup>1</sup>

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## The Future Urban, Littoral Operating Environment

Five broad trends suggest a need to focus on the urban, littoral environment. These trends are not exhaustive and are among many that can be expected to enable and shape the future environment. While no single trend will dominate the global future, all of them have mutually reinforcing characteristics and will influence the capabilities, priorities, and behavior of nonstate actors in a way that markedly reshapes the future conflict environment. This article focuses on a particular threat type, nonstate and substate groups, and therefore does not address many other threats facing the global future operating environment.

### *Trend 1: Rapid Urbanization in the Littoral.*

Global urban environments and the populations they support are expanding rapidly against the backdrop of global interconnectivity. In 1800, only 3 percent of the world's population lived in cities. By 1900, the figure had increased to 13 percent, and by 2000, it was 47 percent. As of April 2008, for the first time in

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history, more than 50 percent of humans on the planet live in cities, which is where over half the world's gross domestic product is generated.<sup>2</sup> By 2030, nearly 60 percent of the world's estimated 8.3 billion inhabitants will live in cities or expanding megacities (those with populations over 10 million) mostly in the developing world. In 1950, there were 83 cities with populations over one million. By 2007, there were

468. Although the overall rates of urban growth have slowed in recent years—and not all of the world's cities or 23 megacities are increasing in numbers—it is the scope and size of the current change among the world's growing population centers, including both middle-size cities with populations ranging from 500,000 to 10 million and smaller cities with populations under 500,000 (where over half of population growth actually takes place), that continue to fuel this trend.<sup>3</sup> Consequently, most urban spaces exist in the littorals, where over three-quarters of the world population resides and in which nearly all of the marketplaces and transit hubs for international trade exist.<sup>4</sup>

With migration to urban centers along the coasts also on the rise, urban planners are continually challenged by the risks associated with overloaded infrastructure, the impact of climate change, environmental degradation, and resource scarcity. As people move to population centers, many are forced into poor areas, comprised of urban slums or shantytowns, where governance and the rule of law are weak. While smaller urban centers may gain from the growing worldwide trend of political and administrative decentralization in which national governments are devolving some of their powers to local governments, large urban centers most likely will not. Sprawling slums such as those in Karachi, Dhaka, Cairo, and Lagos and the conditions they breed may overload the systems, helping fuel the vicious cycle of disease, poverty, criminality, and political unrest. Where political systems are weak or oppressive, the combination of population growth and urbanization will foster instability, and nonstate and substate actors will emerge to challenge the state's monopoly on violence.

As the features of the world become more intertwined, the cascading effect of a

crisis stemming from one of the world's most populated cities would be all too amenable to exploitation by local actors, all of whom are seeking to manipulate local grievances as a way to tilt the status quo in their favor. In the developing world, weak governments cannot maintain the rule of law or provide the services, infrastructure, and social provisions necessary to prevent or mitigate instability, nor can they create the conditions necessary to foster and stimulate private-sector job growth. While foreign direct investment may present opportunities for growth, it may also act as a destabilizing factor when focused on exploitative or extractive industries. In cases where weak governance persists and nonstate actors can outgun, co-opt, or corrupt local security forces, intrastate conflict may erupt and cause widespread human suffering, prompting the U.S. military to consider initiating a range of humanitarian assistance, disaster relief, and stabilization and reconstruction tasks alongside kinetic military operations. Because global societies increasingly live in littoral, networked slum-cities, and warfare is in itself a social activity, future conflict is likely to include a substantial proportion of military operations in such terrain.

**Trend 2: Cross-border Migration.** The mass movement of people from rural to urban littoral spaces is only one side of the migration equation. The other side involves the movement of individuals from poor countries and regions to wealthier ones and from violent and unstable countries to more stable ones.

As evidenced by Western Europe's attempts to integrate its growing Muslim immigrant population, these migration patterns sometimes upset the status quo of developed countries. While such migration often brings economic dynamism to the host nation

through migrant labor and mobility, it can also prompt violent nationalist backlashes. At the same time, migration has become an important component of population growth in countries in Western Europe as well as in the United States and Canada where birthrates have declined. But whether legal, illegal, or forced, migration from developing to developed countries is likely to increase, potentially aggravating governance problems and social tensions. This may lead to the fragmentation and destabilization of communities and possibly states as global networks of ethnic communities, or diasporas—linked together by information technology and shared heritage, language, and religion—play a larger role in international conflict and cooperation.

**Trend 3: Globalized Diasporas.** Diasporas are ethnic communities whose members have left a city or region for economic, safety, or political reasons and have settled in another city or region. Despite diminished physical ties, most migrants take with them the cultural aspects of their ancestral territory. The ties between groups remain strong as dispersed populations seek out current information as a way to stay connected to their homelands. Such nostalgia creates a demand for cultural products and information sources that maintain and celebrate the links between the diaspora and its homeland. Resettled communities use modern communications technologies such as the Internet, mobile telecommunications platforms, and the global media to close the distance between homeland and host nation.

The global spread of the Internet and social media affords these groups a rapid and reliable link to their home communities. Barely a decade ago, these linkages were slow and scarce, supported primarily by expensive

international landline phone calls, periodic and unreliable global postal services, newspapers, and the then fledgling and mostly inaccessible Internet. While governments try to maintain control over human movement and information flows within and across their borders, little can be done to prevent the facilitation and strengthening of connections once a diaspora has settled. Thus, host-nation governments are finding it increasingly difficult to encourage assimilation in the face of tech-driven bottom-up globalization. Due to technology innovation and access, homeland politics can quickly become flashpoints for politically active militant diasporas engaged in a wide range of legal or illegal activities.

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Diaspora political activity in a new homeland may fall into the following categories:

- virtual or physical political mobilization, recruitment, and fundraising within the diaspora by nonmilitant members
- advocacy and lobbying efforts targeted at host-nation and/or other national governments and international organizations
- criminal fundraising/activity to raise money for an organization or cause
- physical intimidation of members of an ethnic community in a host nation
- acts of terrorism executed against a homeland or nonhomeland third country, but planned, organized, or supported by diaspora militant groups in a host nation

- violence committed against host-nation installations, institutions, and populations by diaspora-based or -supported militant groups.

*Trend 4: Interconnectedness.* The widespread availability and integration of advanced communications technologies are exponentially accelerating the pace of globalization. According to the International Telecommunication Union, by the end of 2010, about 90 percent of the world population, including 80 percent of the population living in rural areas, had access to mobile networks. With an estimated 5.3 billion mobile cellular subscriptions worldwide, nearly 80 percent of the global population is connected via mobile phone. In fact, the mobile market is reaching saturation levels in developed countries, with more subscriptions than people reported at the end of 2010. Meanwhile, the developing world increased its share of mobile subscriptions from roughly half to nearly three-fourths of the population between 2005 and 2010. As developed and developing countries have moved from 2G to 3G platforms—and increasingly to 4G wireless platforms—short message service (SMS), a text messaging service component of phone, Web, and mobile communication systems, has become the most widely used data application in the world. Between 2007 and 2010, the number of SMSs sent globally tripled from an estimated 1.8 trillion to 6.1 trillion, meaning that close to 200,000 text messages are transmitted within and across societies every second. In addition to mobile connectivity, the number of Internet users has doubled recently. Today, an estimated two billion unique users access the Web annually, and growing demand for higher speed connections is increasing at a much faster rate than it can be

supplied.<sup>5</sup> Whether through smart phones or cloud computing, rapid communication from one end of the globe to the other is no longer a luxury available only to highly developed states and societies.

In the future, virtually everyone will be connected via the Internet, mobile telecommunications platforms, hand-held computing devices, and global media. This growth in connectivity is allowing like-minded individuals, organizations, and societies to connect regardless of the physical distance and political barriers that separate them. Globalization is doing much more, however, than just flattening the world by eliminating restrictions on the flow of ideas and information within and across societies. It is also creating tightly interconnected networks of infrastructures and markets that are transforming economies, businesses, and the daily lives of billions of people. The interaction of globalization and communication technology diffusion will impact warfare's diversity as emerging threat groups learn to exploit the world's exploding social and economic cohesion. In some cases, borders that were formerly defined by politics will be increasingly fragmented by newer concepts including economic pacts such as the BRIC nations (Brazil, Russia, India, and China) or the Organization of the Petroleum Exporting Countries, and by others with ancient ties based on history, ethnicity, religion, language, and culture.<sup>6</sup> In the future strategic environment, interconnected societies, economies, and critical infrastructure will present themselves as targets of opportunity prone to shocks and disruptions through attacks on flows of capital, energy, commerce, and communications. Such global interconnectedness will bring together opportunities and vulnerabilities in creative ways to produce familiar

disasters in unfamiliar forms and unfamiliar disasters in forms not yet imagined.

*Trend 5: Ubiquitous Media.* The targeted use of social and new media presents both threats and opportunities for state and non-state actors. Illustrative of this point is the 2011 military action in Libya between the rebels backed by the North Atlantic Treaty Organization and Muammar Qadhafi's security forces. During the conflict, both sides repeatedly distorted the facts in what could be perceived as either weak attempts at disinformation or desperate attempts at self-deception.<sup>7</sup> The difference now as compared to the initial stage of the information revolution is the speed, reach, and scope of communica-

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tion platforms. While cell phones and email reach hundreds of people in a day, Twitter, Facebook, and the journalists who use these media can reach thousands who, in turn, can reach tens or hundreds of thousands more. The use of social and international media to influence local and global civilian populations is changing relationship dynamics between states and their citizenry as well as the acceptable norms of conflict.

In the future strategic environment, armed nonstate actors may use social and new media in different ways to achieve strategic, operational, and tactical ends. These include but are not limited to:

- organizing and inciting political and social activism

- mining for open-source information on potential targets
- promoting positive self-images while portraying the opposition in a negative light
- reporting on foreign military operations as they are conducted
- shaping the narrative or perception of a military operation/conflict
- applying pressure on local and foreign governments.

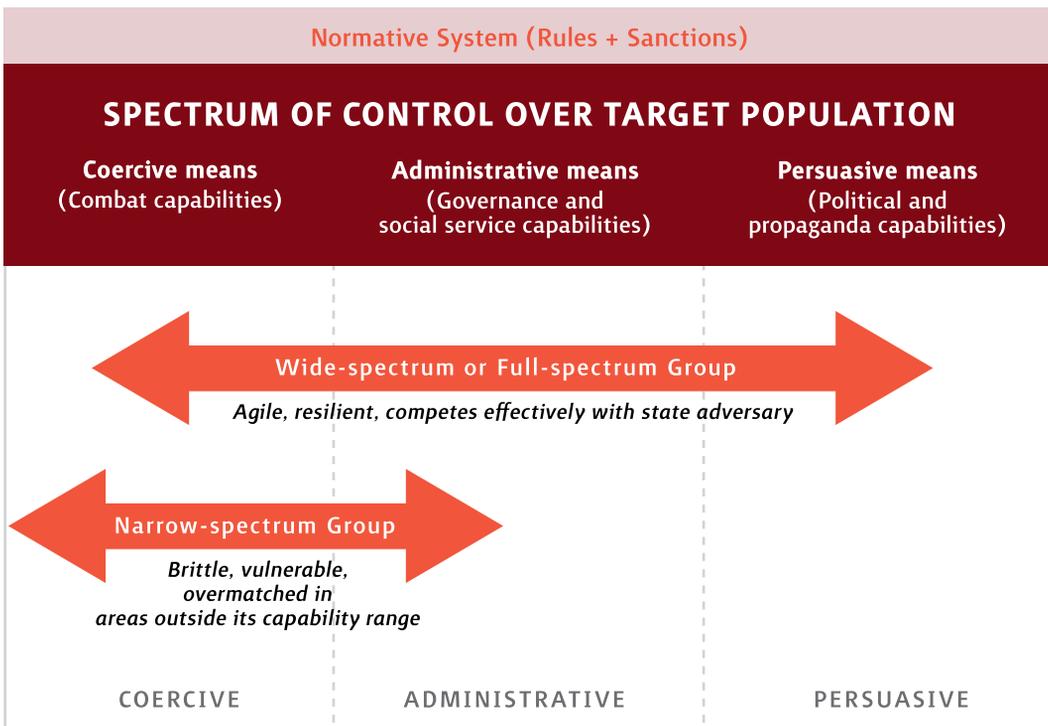
Ignoring this problem to focus purely on near-peer threats—or seeking to state as a matter of policy or as a tenet of planning that we will not fight in urban terrain—is unrealistic, as evidenced in recent operations. Furthermore, it limits our ability to project power in the future. And it does a significant disservice to military

personnel who will inevitably find themselves in situations they have not been trained or equipped for. The threats emanating from these urban centers use this terrain as the source of their power, a capability generator, and a force multiplier. Seeking to influence their behavior will require an ability to influence their environment.

**The Threat**

During the course of the past two decades, nonstate or substate actors have developed highly effective capability along a spectrum of competitive control from coercive (combat capabilities) through administrative (governance and social service capabilities) into persuasive means (political and propaganda capabilities).<sup>8</sup> Competitive control theory is depicted in the figure.

**Figure. Competitive Control Theory**



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For the purposes of this analysis, Hizballah provides an excellent case study as a group that has proven successful along the full-capabilities spectrum. In addition to Hizballah, the Liberation Tigers of Tamil Eelam (LTTE) and Lashkar-e-Taiba (LeT) (focusing mostly on LeT's November 2008 Mumbai attacks) operate along different, narrower swaths of the spectrum, and serve to deepen a baseline capabilities analysis. LeT in particular is a group recognized as highly successful in the combat (or coercive) domain, but when engaging in expeditionary operations, such as those in Mumbai, it is brittle and vulnerable to tactics and capabilities outside its decidedly kinetic comfort zone. These groups are notable not only for their ability to innovate and shape-shift rapidly to changing conditions on the battlefield, but also for their ability to move, operate, and breed among local and global communities, fading into and out of complex physical and human terrain while employing various political, ideological, economic, diplomatic, and military means in pursuit of their objectives.

A baseline knowledge and analysis of the capabilities (including vulnerabilities and requirements) and centers of gravity of these established, lethal, irregular groups, generalized into how they operate in the current environment, can inform analysis on how similar groups might operate in the future.

If so much capability is available today, what will such groups be capable of by 2025? Given the current success of developing capability across a spectrum of control, irregular threat groups are likely to continue with this approach. With broader trends of technological advancement in the commercial sphere, some groups can be expected to inject advanced technology in specific areas to multiply their effectiveness. Other groups will be

able to further augment their capability with support from state sponsors.

### The Future Threat

Thinking through a hypothetical scenario can be beneficial in order to understand the potential actions and capabilities of threat groups and the ways in which they will interact with their operating environment.<sup>9</sup>

Consider a large port city in Southeast Asia in 2025. A major shipping hub, this city also has a successful semiconductor and electronics industry and burgeoning light manufacturing. It is home to many expatriates, including Americans, working for international corporations. Despite strength in some economic sectors, development has been uneven with one ethnic group dominating the political scene and deriving the majority of economic benefit. With the impact of two civil wars still

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in the memory of older citizens, a domestic nonstate actor now serves the interests of the city's second largest ethnic group, which is not feeling the economic largesse that the elites are enjoying. This large substate threat group, given the fictitious name Dardallah in this scenario, has matured from its anarchic beginnings as a formidable and creative guerrilla organization and possesses significant capabilities across the spectrum of control, a summary of which is shown below.

#### *Coercive (Combat)*

- elite commandos at sea and on land

- artillery and indirect fire capability (precision-guided munitions)
- mines and improvised explosive devices (IEDs)
- drones, semi-autonomous systems, miniaturization, and artificial intelligence
- rapid hardware/software generation and regeneration
- autonomous targeting/intelligence, surveillance, and reconnaissance/command and control
- access to remote support virtual and physical networks.

*Administrative (Governance/Social Services)*

- knowledge and capacity to conduct economic warfare
- multiple, legitimate businesses, including those that operate the city port
- social service delivery, charity, and entrepreneurial organizations
- distinct, mutually beneficial relationships with business and banking communities
- parallel law enforcement and legal system to maintain law and order.

*Persuasive (Political/Propaganda)*

- mobile communications/information networks and platforms
- false flag operations and information exploitation
- use of social and conventional media to control and manipulate narratives
- established relations with diaspora.

Within this complex context, a separate nonstate actor seeks to create instability in order to achieve its own political objectives, drawing

heavily on the support of a third-country state sponsor. This small but lethal group, given the fictitious name Jovani Brigade, successfully executes a spectacular attack, assassinating the nation's president. The resulting turmoil within the state's security forces calls into question the ability of the weak government to maintain security and retain its slim grip on authority. Such an attack is well within the group's capability, as outlined below in a list of their capabilities across the spectrum of control.

*Coercive (Combat)*

- superior adaptability, rapid prototype fielding, and reverse engineering
- spectacular attacks (without mitigation by social or value constraints)
- excellent expeditionary maritime capabilities
- training and resources from a state-level sponsor
- sophisticated time-delayed explosives
- exceptional innovative capacity.

*Administrative (Governance/Social Services)*

- extensive human intelligence network of informants, indoctrinated and proliferated via religious/education establishments
- deliberate capitalization on weak host-nation state services provided for ethnic, cultural, and religious kin, and offer alternatives.

*Persuasive (Political/Propaganda)*

- false flag operations and information exploitation
- use of social and conventional media to control and manipulate narratives

- “suicide through fighting,” leading to widespread lethality
- terrorist motivation—ability to invoke fear in target population and undermine confidence in security forces’ response.

With the rapid deterioration of security following the assassination, the U.S. Ambassador requests a noncombatant evacuation operation (NEO) to evacuate American citizens and select host- and third-country nationals. An Amphibious Readiness Group/Marine Expeditionary Unit (ARG/MEU) is tasked and responds. In addition to the evacuation mission, the ARG/MEU commander is cautioned to avoid becoming embroiled in local security matters and to avoid escalating the conflict. Despite concerns about antiaccess/area-denial threats, the ARG/MEU receives unopposed access to the city’s port. Commanders are aware of the complex dynamic that they are entering but do not have the means to rapidly vet the individuals they must work with to achieve the mission.

In the initial phase of the operation, U.S. forces work with both government forces and representatives of the Dardallah, the well-established domestic nonstate actor that is providing security across most of the northern parts of the city. While awkward and tense given the thinly veiled contempt these armed groups have for each other, this approach is initially acceptable since neither group involved wants to engage in a major conflict, particularly since the city is still in turmoil following the assassination, whose perpetrators, the Jovani Brigade, are still at large. Dardallah is deriving considerable prestige and revenue from their association with U.S. forces, so it is willing to allow them access to their “territory” in the northern part of the city.

Despite losing over half its force in the assassination operation, the Jovani Brigade has been able to regroup and has been further tasked by its state sponsor to stay in place, reconstitute, and plan follow-on operations aimed at further destabilizing the situation. The ultimate objective is to force an extended closure of the port, cutting off international trade, and crippling the local economy. Attacks that embarrass the United States are a major secondary objective.

Although some tension exists between the security arm of the local group and U.S. forces, the NEO progresses well. U.S. forces establish assembly areas at appropriate locations throughout the city, operating in a distributed manner to process individuals and provide safe passage out of the country. Things change dramatically when video emerges online that

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is quickly picked up by mainstream international media showing U.S. forces raiding a home and allegedly massacring unarmed women and children. This is combined with credible reports that U.S. forces have occupied a girls’ school and are mistreating the students, who are primarily from Dardallah communities. It will emerge some days later that this footage was created and subtly distributed by the Jovani Brigade and has no basis in fact.

An angry mob descends on the girls’ school, which is being used as an assembly area by a platoon of U.S. forces. Dardallah’s armed forces feel compelled to raid the school to protect the girls, who are allegedly being abused, and to maintain their credibility in

the face of the agitated mob. The situation quickly deteriorates.

A quick reaction force is dispatched to provide support to the isolated platoon. However, this force comes under frequent attack from remotely triggered IEDs previously emplaced by the Jovani Brigade and supported by an observer drone. The isolated platoon is able to maintain its perimeter but comes under sustained, accurate indirect fire from precision munitions. Air support is turned back by these fires and by swarms of different unmanned aerial vehicles (UAVs) with indeterminate capability. The port is closed, and while attempts at attacking and boarding U.S. vessels in port are easily repelled, accurate rocket fire, UAVs, and attacks from small boats force the sea base farther offshore, degrading the U.S. ability to provide meaningful support to forces ashore.

Local government security forces attempt to support the U.S. forces but are ineffectual.

Additionally, enemy groups are at times operating in local security force uniforms and vehicles and may even be members of the local security forces. U.S. commanders on the ground are compelled to make an ongoing series of unpalatable decisions. If desired, they can bring sufficient firepower to bear to address almost any given threat. However, that further escalates a conflict the United States does not want to be involved in. At the same time, the safety of American citizens and military personnel is paramount and significant losses will likely trigger a major troop deployment that places the United States at risk of becoming responsible for ongoing stabilization operations.

### Implications

A variety of hypothetical strategic and operational approaches could be employed to resolve this hypothetical conundrum. However, the ultimate purpose here is to better



Scott Randall

Slum in Dhaka, Bangladesh

understand the future operating environment, enemy capability, and the implications for U.S. forces. Several implications and observations derived from this analysis are listed below. As with the majority of futures-based analysis, many of these phenomena can already be seen in today's world but will grow in frequency, significance, and impact over time. They range from the philosophical to the practical and cannot easily be considered in a single framework or context.

*What Is the Battlespace?* Globally distributed and highly connected national and ethnic groups are forcing changes to current thinking on what defines the battlespace. Tactical kinetic action is readily understood, but a number of other factors remain in a gray area, considered by some to be part of the battlespace and by others to be off limits in terms of decisive action. There are multifaceted challenges involved when evaluating where an enemy group's funding is coming from, or countering the information operations of a threat group, or when a group's leadership is based (or sponsored) in one or more third countries leading to remote command and control. Attempts to disrupt logistical lines, upset port operations, or provoke protests in countries that host large diaspora populations would have a direct impact on the battlespace. Nonstate and substate actors will continue to take advantage of these seams, which take the concept of a noncontiguous battlespace and expand it around the globe. It remains to be seen whether existing definitions of theater, strategic, and tactical battlespace will remain sufficiently meaningful to allow military professionals to effectively untangle the multiple "fronts" in enemy action and frame appropriate responses.

*Adaptive Enemy Capability Development.* Increasingly sophisticated technology will

further allow potential enemy groups to develop capability. The current adaptation competition around IEDs is the most obvious example of this dynamic and its implications in both combat effect and cost asymmetry. Existing evidence of groups such as Hizballah and LTTE developing or adapting drone capability, submarines, armor, and the ability to hack satellites indicates the probability of an even more heavily contested capability battle in the future. In a strategic sense, evolving technology trends suggest

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that military innovation is increasingly lagging behind commercial investment and development.<sup>10</sup> What this means in a practical sense for current and future irregular threat groups is that technologies currently exist or are being developed in the open-access space that will empower them in ways that were unavailable, and indeed unimaginable, to even large state actors a generation ago. Unencumbered by large bureaucracies and with an imperative to adapt or face annihilation, irregular threat groups will likely continue to out-adapt government forces.

*Information (as the Locus of) Operations.* Increased connectedness and sophisticated information technology do not equal situational awareness. In a complex and noncontiguous battlespace, the importance of information operations increases even beyond the significance realized in the past 10 years. Information objectives will be the nucleus of operations and specific actions. False flag operations, information manipulation, and the intentional spread of misinformation will

form the core of a persistent battle that goes beyond social media, contested narratives, and perception to include the commencement or cessation of kinetic activity based purely on activity undertaken in the information space. Success in the physical world will not translate into overall victory if not supported by successful information operations.

**Critical Infrastructure.** Nonstate and substate actors will continue to seek to create niche critical infrastructure of their own (for example, fiber optic networks and radio relays) that serve legitimate public needs and enable clandestine activity. Established substate groups have demonstrated the ability to create charitable and/or entrepreneurial organizations that are used to raise funds

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via licit means and to inculcate populations to their cause by augmenting or replacing the insufficient services of a host nation. In a sobering trend, the global illicit economy has continued to deepen and expand in reach and effectiveness, leading to a twisted web of transnational criminal organizations and terrorist groups working together along multiple pathways.

**Technology “Hugging.”** Nonstate and substate actors will seek to protect their technology base via technology “hugging,” that is, by piggybacking on broadly available public assets. This may be in the form of capitalizing on the public Internet or freely available government assets, global positioning system (GPS), or mobile technology platforms.

In some cases, technology employed as part of a blue force operation may be utilized by threat groups. This will deter or make impossible jamming activity from a technologically superior government force.

**The Impossibility of Situational Awareness.** Given the complexity of the human, physical, and informational terrain, requirements for situational awareness will grow to become even more demanding. Situational awareness includes an understanding of the threat as well as the political, social, and physical elements of the environment. This requires the ability to understand relationships across a diaspora community, state sponsors, and regional tensions, and the implications of those in the tactical battlespace. This is in addition to the extant and growing requirement to be able to understand and navigate the geographic, cultural, and language realities of the tactical battlespace. The urban, littoral operating environment is too complex to track all of these elements simultaneously and continuously and would present instant information overload to almost any existing staff.

Recent conflicts have reiterated that, particularly in the first hours and days, it is nearly impossible to accurately separate good local partners from bad ones when rapidly deploying U.S. forces into an environment marked by complexity in many overlapping domains. A frequent and urgent need is to provide forward-deployed military units with support from virtual teams of intelligence analysts who would be able to process separate streams of open-source and traditional intelligence, thereby rapidly delivering a combined and more comprehensive intelligence product to military commanders. All efforts to increase the situational awareness of deployed forces while simultaneously creating a force that

can succeed without ever truly achieving situational awareness must continue.

***Flexible Expeditionary Contracting.*** One mechanism to rapidly develop situational awareness is to hire vetted local expertise, such as through embassies or other trusted sources. Current contracting approaches and mechanisms lack both the flexibility and rigor to appropriately support deployed forces operating against irregular forces in an urban, littoral environment. Future forces will require a range of innovative approaches to rapidly acquire materials, knowledge, and vetted personnel in distant environments in order to accomplish missions on short notice, cost effectively, and with a small footprint. To support future warfighter needs, this contracting capability should include the ability to hire both providers of security services, such as armed personnel to protect private property, assets, and individuals, and service contractors who handle duties other than security, such as logistics, transport, linguistics, construction, and some intelligence analysis.

Any such solution would, of course, require improvements in situational awareness and rapid analysis as well as strong oversight to guard against abuse by friendly or enemy forces and to understand the second- and third-order effects of contracting with given groups.

***Joint Forcible Exit.*** Antiaccess/area-denial capabilities are of increasing concern for U.S. forces. Working through our hypothetical scenario, enemy groups did not employ these capabilities for large-scale denial activities. Rather, U.S. forces were allowed to freely enter the area of operations. When kinetic operations commenced, these capabilities were used to deny U.S. forces access to tactical airspace and severely limit ground mobility. Effective

strikes on a sea base were deemed unlikely to succeed, but the ability to push assets farther offshore, thereby impacting frequency and time on target for sea-based support, was deemed exceptionally simple. This allowed enemy forces to isolate U.S. forces and deny them access to combat support and combined arms in an attempt to create overmatch.

Operationally, this approach left U.S. forces on the horns of a dilemma. On one side, U.S. forces would sustain significant casualties, allowing enemy forces to claim “victory” or forcing a potential large-scale deployment of forces and, conceivably, a long-term commitment. The alternative would be for U.S. forces to apply significant lethal force leading to civilian casualties and international condemnation. This ultimately led to a desire to develop concepts allowing for a fighting withdrawal that protected U.S. interests, supported operational objectives, and denied the enemy a propaganda victory. The presence of a few thousand American citizens and other civilian noncombatants requiring protection and evacuation placed U.S. forces in a sobering quandary of trying to quickly determine acceptable ways to “fight their way out” among an increasing number of agitated local civilians in a security environment that was rapidly deteriorating.

***Thinking About Nonlethal Weapons.*** A sophisticated and highly lethal adversary operating within a densely populated urban environment points to a need for an advanced suite of nonlethal capability. Because most future military operations will be conducted under the constant spotlight of local and global opinion, U.S. warfighters will be expected to integrate and apply a wide range of lethal and nonlethal capabilities in order to avoid civilian casualties and damage to the urban infrastructure.

Current nonlethal capability focuses on the ability to actively change the behavior of a single individual or small group. There are few options for passive systems or capability to address larger groups. Most importantly, there is the paucity of operationally meaningful concepts of operation to support current or future investments in nonlethal technical solutions.

### Counterproliferation

Given future enemies' likely ability to undertake adaptive capability development, U.S. forces will require a sophisticated tiered mitigation approach in responding to these capabilities. Three related categories of effort described below extend the idea of counterproliferation from its traditional focus on weapons of mass destruction.

First, from a counterproliferation perspective, there is acceptance that little can be done

*the number and range of future threat permutations should be expected to be highly varied and increasingly lethal*

to prevent the spread of advanced multi-use technologies such as GPS and various communication encryption devices. However, with technology increasingly being produced not only by individual states and companies but also by combinations of actors and organizations, the U.S. Government can improve its ability to target or exploit illicit cooperative arrangements and pathways through multiple capability pathway interdiction.

Second, mitigation requires the United States to maintain its competitive advantage in employing combined arms across multiple domains in the urban littoral battlespace. In this sense, mitigation includes a continuous

loop of tactical lessons learned, concept development, experimentation, and training to motivate U.S. adaptation to new threats during a single deployment.

Third, the Department of Defense can take advantage of new and continued partnerships and collaborative exercises with scientists, engineers, and industry to encourage and accelerate the emergence of commercial technologies that simultaneously meet defense needs. Although the U.S. military is likely to maintain its technical and tactical dominance in the emerging and future strategic environment, the use of increasingly accessible, multipurpose, and lethal technologies by non-state actors will give an entirely new meaning to "plug and play," leading to greater tactical proficiency for the enemy.

Without deliberate acknowledgment of the importance of all three of these tracks, particularly with an eye to emerging capabilities that impact the governance and informational spheres, the gap between how "red" adapts as compared to "blue" can be expected to widen.

### Conclusion

When future conflict occurs, it is highly unlikely that it will look like either the "conventional" conflicts of the 20<sup>th</sup> century or recent counterinsurgency conflicts. Whatever the realities of evolved irregular threats and urban littoral combat in 2025, the historical antecedents of that reality will be visible in the circumstances of today.

Given the present rate of technological change and shifting geopolitical power, the number and range of future threat permutations should be expected to be highly varied and increasingly lethal. The United States cannot afford to optimize for one-threat

profile. Threats from near-peer competitors, for example, cannot be ignored or become the sole focus of national security professionals. Serious attention and investment must also be given to the evolving capability of irregular threats and their most likely operating environment, the urban littoral. Impending fiscal constraints and the current approaches to acquisition, capability development, and contracting, coupled with technology innovation in the open-source, private-sector world, will allow irregular adversaries to continue to gain ground on U.S. forces in terms of warfighting capability. Ignoring this problem space leaves us at risk of finding ourselves fighting expensive wars on terms the enemy has chosen against capabilities we are unprepared to counter in an environment we are unfamiliar with.

Despite these grim realities, the United States remains the world's preeminent fighting force, easily capable of achieving victory over any irregular enemy in a kinetic engagement. The key challenges in addressing evolved irregular threats are conceptual and organizational. Consequently, measured investments should be made in experimentation, concept development, education and training, acquisition, and capability development reform and private-sector collaboration in order to prepare future warfighters for the inherent uncertainty of their operating environment. Being unable to predict specific futures need not inhibit effective preparation. **PRISM**

## Notes

<sup>1</sup> This article is based on the findings of an Office of the Secretary of Defense–funded project under the stewardship of Colonel Patrick Kelleher, USMC, on behalf of the Rapid Reaction Technology Office. The project was undertaken by Noetic Corporation, with the

intellectual guidance of Dr. David Kilcullen. The article is based on an internal report, authored by Kyle Flynn of Noetic, as well as the experience of the authors in developing and running the project.

<sup>2</sup> “Urban World: Mapping the Economic Power of Cities,” McKinsey Global Institute, March 2011.

<sup>3</sup> United Nations Department of Economic and Social Affairs, “World Urbanization Prospects: The 2009 Revision,” available at <<http://esa.un.org/unpd/wup/index.htm>>.

<sup>4</sup> The littoral comprises two segments of operational environment: the *seaward*, or the area from the open ocean to the shore, which must be controlled to support operations ashore; and the *landward*, or the area inland from the shore, which can be supported and defended directly from the sea. See Joint Publication 2-10.3, *Joint Intelligence Preparation of the Operational Environment* (Washington, DC: The Joint Staff, June 16, 2009).

<sup>5</sup> International Telecommunication Union, “The World In 2010: The Rise of 3G,” *ICT Facts and Figures* (2010), available at <[www.itu.int/ITU-D/ict/material/FactsFigures2010.pdf](http://www.itu.int/ITU-D/ict/material/FactsFigures2010.pdf)>.

<sup>6</sup> Joel Kotkin, “The New World Order: Tribal Ties—Race, Ethnicity, and Religion—Are Becoming More Important Than Borders,” *Newsweek*, September 26, 2010.

<sup>7</sup> David D. Kirkpatrick and Rod Nordland, “Waves of Disinformation and Confusion Swamp the Truth in Libya,” *The New York Times*, August 23, 2011.

<sup>8</sup> David J. Kilcullen, 2009. Used by permission. This diagram served as the theoretical underpinning of the Evolved Irregular Threat Project research.

<sup>9</sup> The scenarios, operating environment, and enemy groups used in this hypothetical were developed and “evolved” over a series of wargames involving subject matter experts from academia, think tanks, and across the interagency, including Active-duty and retired military personnel. This short summary cannot fully summarize the significant analysis and justification for the plausibility of the actions described here.

<sup>10</sup> Office of the Secretary of Defense for Acquisition, Technology, and Logistics, *Challenges to Military Operations in Support of National Interests*, Defense Science Board 2007 Summer Study, December 2008, 6.