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Irregular Warfare in the Age of Technology



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In our rapidly evolving technological age, the face of irregular warfare — historically characterized by asymmetric tactics and human-centric operations — finds itself undergoing a transformation. While technology promises amplified capabilities for those involved in irregular warfare, it also brings along its own set of unprecedented challenges. This complex relationship between irregular warfare and technology prompts a pivotal question: In the theater of irregular warfare, does the advantage lie with the force boasting technological superiority or with the adversary that tactically reduces its reliance on technology?

IWC MISSION: The IWC serves as the central mechanism for developing the Department of Defense's (DOD) irregular warfare knowledge and advancing the Department's understanding of irregular warfare concepts and doctrine in collaboration with key allies and partners.



TECHNOLOGICAL ADVANTAGES IN IRREGULAR WARFARE

The benefits brought forth by technology in IW are indeed extensive. <u>Cutting-edge drones</u>, satellite imagery, artificial intelligence, and advanced electronic signals intelligence are revolutionizing intelligence, surveillance, and reconnaissance (ISR), allowing for real-time data acquisition about adversaries and setting the stage for precision operations. <u>Artificial intelligence and analytics</u>, integrated into ISR and communications, facilitate the processing of vast data pools, yielding insights integral to strategic planning. Moreover, the advent of secure communication systems has facilitated unparalleled coordination among irregular forces dispersed over expansive territories. The introduction of laser-guided munitions, which minimize collateral damage, helps in preserving the goodwill of local populations. In the cognitive warfare domain, digital platforms, particularly social media, have become force multipliers, facilitating psychological operations, propaganda dissemination, and disinformation campaigns. A notable example is the employment of social media by <u>various militant groups</u> for global recruitment and radicalization efforts.

CHALLENGES POSED BY TECHNOLOGY

However, these technological strides are not without their challenges. For every leap in irregular warfare technology, adversaries develop countermeasures. Such responses range from <u>anti-drone tactics</u> to intricate electronic jamming equipment that have neutralized many technological benefits on the battlefield. Furthermore, as irregular warfare forces increasingly embed technology into their operations, they inadvertently leave behind <u>digital traces</u>. Adversaries adept at cyber operations can harness these digital footprints to predict, counter, or even disrupt irregular warfare operations. This vulnerability is further amplified when one considers the potential pitfalls of over-relying on technology, especially when faced with technical glitches or operating in environments that deny technological leverage.

In addition to these technological vulnerabilities, there is the inherent risk of <u>cyber espionage and</u> <u>hacking</u>, where adversaries may steal or manipulate vital information. Over-reliance on technology can also result in a decline in conventional combat abilities, making forces ill-equipped to handle situations in which technology malfunctions or is inapplicable. Furthermore, using technologies like autonomous drones in combat has ethical ramifications that can be quite problematic, influencing public opinion and possibly resulting in legislative limits. These difficulties emphasize the need for a well-rounded strategy that incorporates technology while upholding moral principles and preserving conventional military weapons.

LOW-TECH ADVERSARIES IN HIGH-TECH ENVIRONMENTS

It's fascinating to watch the interaction between forces with advanced technology and those who are less dependent on it. Examples of how they can evade enemies with greater technological prowess include low-tech adversaries like the Taliban or insurgent groups in Africa. Utilizing <u>rudimentary</u> <u>communication</u> techniques and integrating with local populations often allow these low-tech forces to evade detection. Geographical landscapes add another layer of complexity; in difficult environments such as Southeast Asia's dense forests or Afghanistan's rocky terrain, local militias, and guerrilla forces frequently have the upper hand because they are accustomed to the terrain and don't need sophisticated equipment. These low-tech forces have a distinct advantage in the digital battlefield due to their minimal digital engagement.

The recent conflict between Hamas and Israel serves as a stark example of a <u>low-tech adversary</u> successfully challenging a technologically superior environment and adversary. Israel, known for its advanced use of technology for surveillance and intelligence collection, found itself at a disadvantage

when <u>Hamas minimized its use of technology</u> for communications, thereby circumventing Israel's antiair systems and using <u>paragliders</u> to travel into Israel, avoiding defense systems.

PERCEPTIONS, ECONOMICS, AND THE BALANCE OF POWER

Public perception and the narrative, shaped significantly in today's information age, also play a pivotal role. Often, a technologically dominant force might find itself painted as an "invader," leveraging its advanced tools of destruction against an "underdog" or a low-tech adversary. Such perceptions can sway international opinion and, consequently, impact diplomatic and policy decisions. <u>The economic dimensions</u> must also be factored in; maintaining a technological edge is an expensive endeavor, elevating the cost of engagement for technologically advanced forces significantly.

Moreover, the economic burden placed upon technologically inferior forces is comparatively lower, giving them an edge in sustaining longer conflicts. This economic disparity can alter the balance of power, creating an environment where low-tech forces can thrive and challenge their high-tech adversaries effectively. Furthermore, the narrative created by the <u>technological disparity</u> plays a major role in rallying support for the low-tech forces, depicting them as the underdog fighting against a seemingly invincible foe. The local populace may become alienated from technological improvements because of their destructive potential, which can cause a shift in the power dynamics in favor of low-tech forces as they gain support on a national and international level. This complex interplay between perceptions, economics, and power dynamics requires a nuanced approach to fully comprehend the implications of technology in irregular warfare.

NAVIGATING THE DICHOTOMY BETWEEN TECHNOLOGY AND HUMAN ELEMENT IN IRREGULAR WARFARE

As we delve deeper into the intricate relationship between <u>technology and irregular warfare</u>, the resulting landscape presents a paradigm that defies linear advantages. Technology undeniably offers powerful tools to redefine and potentially enhance irregular warfare strategies. However, it simultaneously introduces vulnerabilities, especially when pitted against adversaries skilled in guerrilla tactics and minimal technological engagements. History, ranging from the U.S.'s challenges against the Viet Cong's tactics in Vietnam to the intricacies faced against insurgent tactics in the Middle East and Africa, stands testament to the delicate balance between technology and irregular warfare. The perfect solution in the realm of irregular warfare and technology does not exist. However, the best answer lies in finding the perfect balance.

In the realm of irregular warfare, the essence of victory remains rooted in understanding human dynamics, grasping local geopolitical currents, and mastering the timeless art of adaptability. As the timeless strategist Sun Tzu articulated, the pinnacle of warfare artistry lies in subduing the enemy without direct confrontation, a principle echoing profoundly, regardless of technological progress. This insight serves as a stark reminder that while technology can undoubtedly augment irregular warfare strategies, it should not be relied upon to the detriment of traditional warfare skills and human judgment, which ultimately tip the scales in favor of victory.

The views expressed are those of the author(s) and do not necessarily reflect the official position of the Department of Defense, Defense Security Cooperation Agency, or the Irregular Warfare Center.