

The Revolution in Military Affairs in context of the Information Age: Reengineering Military Knowledge and its Strategic Implications

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Abstract:

This article explores the profound transformations in the art of warfare brought about by the Revolution in Military Affairs (RMA), which has redefined concepts of power, leadership, and combat operations in the information age.

The article traces the historical origins of the RMA, and examines how the RMA has shifted the nature of conflict from conventional wars to asymmetric and networked confrontations.

Internationally and regionally, the RMA has disrupted traditional power balances, replacing arms races with innovation races in military research and development. The article highlights future warfare scenarios characterized by remote control, precision strikes, and strategic paralysis, while also addressing the ethical and operational challenges posed by cyber warfare and autonomous systems.

Keywords:

Revolution in Military Affairs; Artificial Intelligence; Cyber Warfare; Digital Command; Asymmetric Warfare; Remote Control; Power Balance.

Introduction

With the advent of the Information Age -where data has become a central driver of power and influence- militaries are compelled to undertake a comprehensive reassessment of their operational concepts and systems. The new military revolution is no longer measured solely by advancements in weaponry or firepower, but by the capacity to effectively integrate artificial intelligence (AI), cyber systems, and cognitively oriented technologies. This profound transformation is inseparable from contemporary geopolitical contexts; rather, it interacts with them to reshape the relationship between military knowledge and strategic decision-making. Consequently, this demands a thorough reengineering of combat dynamics and command-and-control mechanisms to ensure superiority on future battlefields.

Accordingly, this article addresses the following research problem: How does the revolution in military affairs reshape contemporary security dynamics?

This central problematic gives rise to several subsidiary questions, as outlined below:

- What are the defining features of the military revolution in the Information Age, and how do they conceptually differ from traditional warfare?
- How have information technologies influenced the development of military capabilities and field operations?
- What roles do artificial intelligence, cyber warfare, and real-time processing systems play in shaping new dynamics of military command?

Furthermore, in pursuit of the research objectives, the following hypotheses are proposed:

- The information revolution has fundamentally transformed the nature of conflict, enabling a redefinition of power through non-traditional metrics.
- Data and control over its flow have become decisive factors in engineering military knowledge and strategy, thereby altering concepts of command and control.
- Sovereign institutions -particularly the military- face dual challenges: adapting to rapid technological advancements while safeguarding national security against emerging cyber and informational threats.

In accordance with the central research question, the sub-questions, and the proposed hypotheses, the article will be organized into four main sections:

- I. A Theoretical Approach to the Revolution in Military Affairs: Definitions, Characteristics, and Classifications;

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- II. Reengineering Military Knowledge in Light of the Revolution in Military Affairs;
 - III. International and Regional Implications of the Revolution in Military Affairs;
 - IV. Strategic Consequences of the Revolution in Military Affairs.

I. A Theoretical Approach to the Revolution in Military Affairs

1) The Concept of the Revolution in Military Affairs

The revolution in military affairs is a complex phenomenon, and the concept itself is not new. It resurfaces whenever a major transformation occurs in the art of war. Contrary to common assumptions, the term did not originate in the American strategic environment but rather emerged from Soviet writings and documents in the 1980s concerning the future of warfare. These sources anticipated the dawn of a new era in which conventional weapons would rival the tactical power of nuclear arms.

The American strategist Andrew Marshall was the first to officially employ the term “Revolution in Military Affairs” (RMA) in 1993, drawing inspiration from the writings of Soviet Marshal Nikolai Ogarkov, who had introduced the notion of a “military-technical revolution” in the early 1980s. Marshall expanded the concept, transforming it into a broader framework following the Gulf War, a moment that allowed the United States to showcase its advanced technological capabilities.

Initially, most American scholars were skeptical of the term. However, the Gulf War of 1991 convinced many of its validity, despite its Soviet origins. The asymmetrical battles in the deserts of Kuwait and southern Iraq, coupled with the U.S. Air Force’s complete dominance of Iraqi airspace, demonstrated that warfare had indeed changed after 1991.

In addition to the Gulf War’s role in popularizing the concept, General William Owens -Vice Chairman of the U.S. Joint Chiefs of Staff in 1994- played a pivotal role in institutionalizing the term within American military circles. He spearheaded efforts to establish operational, rather than merely organizational, transformation by integrating three key technological systems: long-range precision strike capabilities, advanced communications networks, and real-time sensor platforms.

2) Characteristics of the Revolution in Military Affairs

According to American analyst Peter Wilson of the RAND Corporation, the *Revolution in Military Affairs* (RMA) is only fully realized when a set of interrelated indicators are met:

- **New technologies:** The development and innovation of unprecedented military technologies.

- **New modes of production:** Transformations in the manufacturing and supply chains of military equipment.
- **New patterns of human mobilization:** Evolution in the recruitment, training, and deployment of military personnel.
- **A new doctrine accompanied by new concepts of force application:** Reformulation of military principles and tactics to align with emerging technologies.
- **New institutions:** The emergence of innovative military organizational structures tailored to the demands of the revolution.
- **New training and formation programs for military personnel:** Modernized education and qualification systems enabling effective use of new technologies and doctrines.

In this context, the RMA is a **multidimensional phenomenon** that extends beyond technological advancement. It encompasses profound shifts in doctrine, organization, and combat functionality. Its defining features may be summarized as follows:

a. Qualitative Technological Advancement

- Integration of advanced technologies such as artificial intelligence, high-performance computing, and unmanned aerial vehicles.
- Emergence of precision weapon systems relying on remote sensing and guided strikes.
- Use of satellite technologies for surveillance, targeting, and operational control.

As Neuneck (2008) notes, the current revolution is grounded in the fusion of information and communication technologies within the structure of military power, fundamentally reshaping the nature of warfare.

b. Doctrinal and Operational Innovation

- Reformulation of core concepts such as deterrence, maneuver, and control.
- Development of new combat doctrines tailored to network-centric operational environments.

- Transition from linear warfare to *Multi-Domain Operations* involving simultaneous engagement across land, air, sea, cyber, and space.

According to FitzSimonds & Van Tol (1994), technology alone does not constitute a revolution; it must be accompanied by an integrated operational doctrine that effectively harnesses these capabilities in combat.

c. Organizational and Institutional Adaptation

- Emergence of new units such as cyber warfare teams and multi-mission special forces.
- Restructuring of military command to align with advanced C4ISR systems (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance).
- Enhancement of structural flexibility to confront asymmetric threats.

As highlighted in a report by *WarHistory.org*, the military revolution demands a redefinition of roles and missions, not merely an upgrade in equipment.

d. Centrality of Information in Conflict Management

- Information has become the foremost strategic resource in modern warfare.
- Real-time intelligence capabilities enable rapid data collection, analysis, and deployment.
- Adversary behavior is shaped through informational paralysis and precision targeting.

e. Networked and Asymmetric Nature of Conflict

- Contemporary warfare is increasingly asymmetric, with conventional actors facing irregular or non-state adversaries.
- Use of unconventional tactics such as cyberattacks, guerrilla warfare, and media disinformation.
- Decline of the traditional “front line” in favor of distributed networks and synchronized strikes.

As Thompson (2016) observes, the military revolution redefines the nature of adversarial engagement and generates new models of strategic interaction.

3) Classifications of the Revolution in Military Affairs

The *Revolution in Military Affairs* (RMA) fundamentally depends on the capabilities introduced by advanced military technologies, capabilities that were previously unavailable. A historical overview reveals a clear positive correlation

between technological progress and the evolution of operational thought: the greater the technological advancement, the more likely new military thinking emerges to meet the urgent need for weapons and equipment development, thereby reshaping combat doctrines to achieve strategic objectives with minimal losses.

Throughout history, military forces have leveraged scientific and technological progress to gain superiority. While the French Revolution (18th century) achieved victory through the ideals of liberty and equality, Russian campaigns in Europe and the American Civil War (mid-19th century) relied on innovations such as the telegraph, railways, and rifles. In the 1930s, Germany combined advanced tactics and management with tanks, radio, and bombs to execute what became known as *Blitzkrieg*.

The RMA focuses on achieving superiority through three core components:

1. **Information Collection** Satellite sensors and unmanned aerial vehicles (UAVs) can detect and monitor all movement within a designated area.
2. **Information Processing** Advanced systems for command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) interpret sensor data, display it on operational screens, and assign specific tasks to missiles and armored units.
3. **Information Utilization** Enables precision strikes on long-range targets. For example, satellite-guided cruise missiles can accurately hit a single building hundreds of miles away.

• **First Military Revolution: The Bow and Early Combat Techniques**

From the dawn of primitive warfare, weapons were divided into two categories: shock weapons (e.g., swords and spears) for close combat, and projectiles (e.g., arrows and grenades) for long-range attacks. The first military-technical revolution was marked by the emergence of the bow, capable of launching 8–12 arrows with a range of up to 400 yards. This innovation transformed deep-range combat and tactical flexibility. It was followed by increased formation density, improved equipment distribution, and enhanced personal protection through individual and full-body armor.

• **Second Military Revolution: Gunpowder and the Age of Firearms**

The second revolution began with the invention of gunpowder by Roger Bacon in 1260, ushering in an era dominated by firearms and artillery. Military thought shifted toward attrition, maneuver, and targeting the enemy's center and rear.

As warfare expanded, the Industrial Revolution compelled militaries to seek new methods. Transportation for artillery and troops improved, supply and maneuver speeds increased, and tanks appeared in 1910. Despite these advances,

artillery remained dominant. The advent of military aviation in 1911 revolutionized mobile warfare, accelerating combat tempo. The German submarine's debut in 1914 reshaped naval strategy.

Post–World War I, military theorists analyzed battlefield experiences, producing new doctrines such as the “small strong army” (Fuller, Liddell Hart, Seeckt, de Gaulle) and air warfare theory (Douhet, Zhukov, Mitchell), which challenged prevailing notions of naval power and positional warfare. These theories underestimated the role of the individual, assuming machines would replace human agency. However, World War II (1939–1945) reaffirmed the centrality of the soldier in operating advanced equipment.

Between the world wars, airborne forces emerged due to advances in aircraft and parachutes, enhancing strategic mobility. Although the Soviets pioneered experimentation, the Germans successfully deployed airborne units in Blitzkrieg operations. The rise of strategic bombers led to the development of unmanned munitions carriers, culminating in the first flying bomb in 1944 and the dawn of surface-to-surface missile warfare.

- **Third Military Revolution: Nuclear Weapons** On August 6, 1945, the third revolution was marked by the deployment of nuclear weapons, as Allied forces dropped the first atomic bomb on Hiroshima, ushering in a new era and altering global power dynamics.

- **Fourth Military Revolution: Electronics and Satellites** The fourth revolution began in 1947 with the invention of the transistor, sparking a technological race in electronics. Electronics became integral to weapon development and enabled satellite construction. Technical innovation focused on delivery systems for explosive or nuclear payloads—via land (artillery and missiles), air (aircraft), space (satellites), and sea (ships and submarines).

- **Fifth Military Revolution: Computing and Precision Warfare** By the late 20th century, with the fall of Marxism and the rise of unipolar capitalism, dominant powers began promoting new military doctrines rooted in the fifth technological revolution, characterized by advanced computing and high-speed data processing. This led to the emergence of integrated, automated, and highly precise weapon systems, especially with the advent of directed-energy technologies.

Experts predict this revolution will transform the tools and methods of warfare. Diverse sensing technologies will enable precise identification and destruction of enemy targets, driven by advances in munitions manufacturing. Future conflicts will rely on *shock and paralysis* strategies rather than traditional attrition warfare. Shock warfare aims to eliminate the adversary's will to fight

early through a combination of information warfare and deep-range precision strikes.

Coalition forces tested elements of this theory during the Gulf War (1991), launching a 39-day air campaign. This campaign featured extensive use of UAVs (530 missions, 1,700 flight hours) and an 85% precision strike rate. The ground campaign lasted only 100 hours with minimal coalition casualties, demonstrating a shift in operational dynamics through simultaneous engagement across three dimensions: close, deep, and rear, delivering the intended shock effect.

Subsequently, U.S. military doctrine was revised to test remote warfare strategies against strategic Iraqi targets in September 1996, achieving objectives without direct confrontation. This accelerated the development of advanced guidance technologies, producing missiles and UAVs guided via GPS, capable of delivering powerful, accurate strikes from long distances.

These systems are programmed to identify, track, and destroy specific targets autonomously. Real-time sensor networks enhance data collection and processing, enabling ultra-precise weapons and improving the efficiency of the information –ecision– action cycle. This grants friendly forces superior operational speed, allowing them to impose strategic will through initiative and decisive combat management.

The world now stands at the threshold of a new military era, a revolution defined by advanced technologies such as:

- **Digital communications** for data compression and storage
- **Satellite systems** for precision missile guidance
- **Stealth aircraft** impervious to radar detection
- **Computer processing**, the most critical component

Signs of this emerging revolution appeared in the 1980s. The Gulf War (1991) was the first conflict fought under its influence, featuring F-117 stealth bombers, laser-guided bombs, and cruise missiles that destroyed Iraqi bases with precision. In Bosnia, U.S. forces deployed the JSTARS system for aerial ground surveillance, capable of detecting and identifying moving vehicles across 200 square kilometers under any weather conditions.

This nascent revolution did not arise solely in response to specific threats against the United States or its allies (as with nuclear weapons), but rather as a strategic imperative. Military leaders recognized the need to harness modern technology to prepare for future threats, echoing Germany's development of

Blitzkrieg in the 1920s, which was based on contemporary technologies rather than imminent war.

4) Intellectual Trends in the Revolution in Military Affairs

The concept of the *Revolution in Military Affairs* (RMA) has given rise to several divergent intellectual currents:

- **First Trend (Proponents):** Followers of Admiral William Owens firmly believe that the RMA is already underway, extending beyond the military domain into the epistemological foundations of warfare itself. For them, the challenge lies not in inventing new technologies, but in how to exploit them effectively. The central issue facing the U.S. military, according to this view, is an engineering problem: constructing a “system of systems” capable of transferring target data seamlessly between platforms and delivering effective firepower.

- **Second Trend (Skeptics):** This group views the current developments as a series of dramatic shifts in war management rather than a true revolution. They are wary of the overconfidence displayed by the first camp. Their main concern is the persistent friction and fog of war, which they believe cannot be eliminated. As such, they remain unconvinced by any “system of systems” or definitive formulation of the RMA.

- **Third Trend (Retired Officers):** While acknowledging revolutionary changes in warfare, this group locates the true revolution in the training reforms of the 1970s. They emphasize the integration of metal-based tools with increasingly realistic exercises and human resource policies focused on recruiting skilled soldiers. Although they recognize the importance of technology, they argue that high-quality training is equally vital.

- **Fourth Trend (Doubters):** This camp is deeply skeptical of the term “revolution in military affairs,” viewing any notion of revolutionary combat as misguided and dangerous. Military historians in this group contend that all so-called revolutions are in fact gradual evolutions. Their rejection of the term stems from a belief that human nature -not technology- ultimately governs the battlefield. They consider the Gulf War an anomaly, shaped by a reckless adversary who presented the U.S. military with an ideal target array.

Veterans aligned with this view argue that the real challenge for U.S. security policy lies in maintaining a robust force while resisting the temptation to replace soldiers with advanced technology. They advocate for comprehensive preparedness across conflict types, even if they refrain from predicting future strategic threats.

- **Current Orientation: From Major Threats to Asymmetric Warfare**

Initially, laser weapon systems and optical technologies represented the first phase of the RMA in the American strategic imagination, aimed at countering major threats. However, the collapse of the Soviet Union, the disappearance of a second superpower, and China's rapprochement with the United States triggered a dramatic shift in threat perception among American strategists.

The specter of catastrophic terrorism began to dominate strategic policy circles in the Pentagon, especially following the Taliban's control of Afghanistan and its support for al-Qaeda, which openly declared hostility toward the United States. Al-Qaeda launched a series of unconventional and surprise attacks, including the bombing of the U.S. embassy in Kenya and the assault on the USS Cole in Aden.

This prompted American planners to seek advanced methods for confronting what became known as the *asymmetrical enemy*, requiring unconventional forms of warfare and novel weapons and tactics. Confronting such threats does not demand massive warships, bombers, artillery, or heavy tanks, but rather agile fighters equipped with high mobility, precision targeting, and advanced communication and guidance systems.

This shift led to the development of multi-mission *Special Forces*. Before these systems and skills were fully realized, the seismic events of September 11, 2001 -marked by the destruction of the Twin Towers and the attack on the Pentagon-delivered an unprecedented shock. This event ended internal Pentagon debates over the RMA's relevance across all branches of the U.S. military.

The technological shock and the scale of destruction were stark, even as military commanders appeared in daily press briefings with calm confidence, detailing large and small operations. On April 9, 2003, the silent image of two American tanks in central Baghdad marked the end of the main showcase of the military machine shaped by the RMA. What followed was a series of ongoing sub-conflicts on Iraqi soil, aimed at confronting *asymmetrical challenges* posed by diverse armed groups seeking to destabilize security.

II. Reengineering Military Knowledge in Light of the Revolution in Military Affairs

Recent informational and digital transformations have triggered fundamental changes in the structure of military institutions, necessitating a comprehensive reengineering of military knowledge to align with the dynamics of the Revolution in Military Affairs (RMA). Knowledge is no longer produced and managed through traditional models; instead, it is now embedded within networked systems that rely on real-time data analysis and the integration of

technical capabilities with operational variables. This article seeks to trace the contours of these transformations, explore their tools, and assess their strategic implications through a layered critical lens.

Military knowledge has transitioned from experiential models to complex analytical frameworks grounded in artificial intelligence and predictive processing. Rather than relying solely on the personal expertise of field commanders, new knowledge systems enable decision-making based on instantaneous data analysis. The concept of *enhanced situational awareness* has emerged, offering an additional cognitive layer for understanding the operational environment in real time, with the capacity to anticipate shifts and threats.

Technological tools now constitute a central pillar in the reengineering of military knowledge. Cloud computing and distributed systems have facilitated access to knowledge bases across command levels, while machine learning technologies have enabled the processing of combat patterns and the forecasting of future scenarios. In the realm of training, virtual and augmented reality environments have introduced immersive simulation experiences that replicate intelligent combat scenarios, thereby enhancing readiness and response capabilities.

This transformation has also reshaped military doctrine itself, as strategic thinking has opened up to hybrid models that merge civilian and military knowledge, leveraging academic and technical expertise to build defensive power. Decision-support systems have reinforced the autonomy of command, moving away from dependence on traditional hierarchical leadership structures. This shift redefines the balance of operational influence and positions knowledge as an active force in shaping military power.

Despite the opportunities this transformation presents, it also raises critical challenges, foremost among them the security of military knowledge. Databases have become strategic targets in cyber warfare. Ethical concerns also surface regarding the use of artificial intelligence, particularly in combat operations and targeting decisions. Moreover, the widening knowledge gap between states exacerbates conditions of dominance and dependency, prompting a reassessment of policies related to participation and openness in building equitable and balanced knowledge systems.

Thus, reengineering military knowledge is not merely a technical response, it represents a strategic shift toward a renewed epistemological model capable of adapting to the complexities of the modern operational environment. Military and academic institutions must collaborate to construct this model through integrative visions that connect analysis, technology, and leadership behavior,

ensuring advanced cognitive readiness and operational performance aligned with future demands.

III. The Revolution in Military Affairs and Its International and Regional Implications

1) Twenty-First Century Wars: Shifting the Grand Balance of Conflict

In the foreseeable future -over the next decade or two- it is unlikely that the world will witness major wars akin to those of World War II in 1945. Such large-scale conflicts have become increasingly implausible in an era where grand ideological alliances have dissolved, and parity among warring armies in terms of armament, combat systems, and operational doctrines has eroded. Whereas past asymmetries leading to victory or defeat were largely confined to material capabilities, logistical efficiency, and the personal skill of commanders, today's strategic landscape is markedly different.

The major powers -those possessing advanced weaponry and the means to produce and sustain it- have aligned their interests toward competition and cooperation that serve mutual objectives, rather than pursuing full-scale confrontation. The rise of the United States as a dominant military power has significantly diminished the likelihood of global wars of the kind seen in the mid-twentieth century.

Some analysts nominate China as the emerging power poised to counterbalance the United States, particularly if its current trajectory of development continues over several decades. However, such projections often overlook the fact that the U.S. is simultaneously accelerating its own progress at a pace that outstrips China and other major powers. As a result, it is likely to maintain its relative superiority, unless unforeseen and dramatic developments intervene to disrupt this momentum and eliminate the strategic gap, thereby enabling the emergence of a truly equivalent superpower.

No state or regional actor can responsibly base its strategic assessments on such speculative scenarios without risking miscalculations with potentially grave consequences. Grounded in tangible realities, each nation seeks the most effective means to secure its national interests and position itself advantageously within the evolving global order.

2) Regional Wars: The Shift Toward Asymmetry

In recent decades, regional wars have undergone a qualitative transformation toward asymmetrical patterns of conflict. Confrontations are no longer governed by the conventional rules of engagement between symmetrical,

state-based armies. Instead, they are increasingly characterized by disparities in capabilities, objectives, and methods. This shift is closely linked to the *Revolution in Military Affairs* (RMA), which has introduced new tools of warfare and compelled a redefinition of military power itself.

Within this context, non-state actors and states with limited capabilities have become able to challenge technologically superior regional or global powers by employing unconventional strategies such as cyber warfare, psychological operations, and unexpected precision strikes. The information revolution has empowered these actors to access instruments of influence without the need for extensive conventional arsenals.

At the international level, this transformation has disrupted traditional military doctrines and forced major powers to reassess their defense strategies, particularly given the unpredictability of asymmetric adversaries. It has also underscored the need to develop more agile intelligence systems capable of detecting and neutralizing non-traditional threats before they escalate.

Regionally, asymmetric warfare has reshaped the balance of power. Conventional military superiority is no longer a guarantee of dominance or deterrence. Instead, new forms of alliances have emerged, based on the exchange of technical knowledge, indirect logistical support, and the strategic deployment of non-state actors in conflict management. This evolution has also generated transboundary security challenges that demand multi-level regional coordination.

Ultimately, asymmetric wars are not merely a military phenomenon; they reflect a structural shift in the understanding of conflict. They call for a comprehensive reengineering of defense systems and security policies to align with the nature of contemporary threats.

IV. Strategic Implications of the Revolution in Military Affairs

Perhaps the foremost strategic consequence of the *Revolution in Military Affairs* (RMA) is the erosion of traditional theories of power balance, along with the arms races that once defined competition between major blocs or regional powers. The paradigm has shifted toward a race for technological superiority in military affairs, one that enables each actor to secure a degree of strategic safety conducive to sustained development and progress, free from direct or indirect threats.

The extent to which a state succeeds in this endeavor determines its ability to exert influence regionally and globally. In this new landscape, the mere availability of external sources for weapons and military supplies -and their

willingness to provide sustained support- is no longer sufficient to build military capacity. States must now invest in developing their own indigenous capabilities across multiple domains. This shift has directly impacted the reassessment of relative power among states and regional actors, not only based on alliances but also on internal competencies.

Modern applications of the RMA, which rely heavily on substantial military budgets allocated to research and development (R&D), have ushered in an era where the strategic commander of the twenty-first century may conduct warfare “by pressing buttons”, that is, through remote control. Yet this model is fraught with caveats: war remains inherently violent, and such approaches struggle to counter guerrilla tactics, irregular warfare, and operations in forests, urban centers, or dense terrain.

In the space domain, small satellites have begun deploying directed laser beams against high-value enemy targets. Satellites and unmanned aerial vehicles (UAVs) transmit real-time damage assessments to strategic command centers, confirming strike success. These operations aim to blind the adversary by paralyzing its command, control, early warning, and air defense systems. The appearance of red illumination over enemy targets signals the success of the strike, announcing a new kind of war, bloodless and dismemberment-free (at least for the attacker).

This is the envisioned scenario for future warfare, currently under development in Northern Virginia, USA. Its objective is to control adversary behavior and compel compliance by neutralizing the enemy’s ability to deploy its armed forces or by degrading its military capabilities without direct human confrontation. In subsequent phases, the adversary may be eliminated without ever engaging on the battlefield, a concept referred to as the “next-generation revolution in military affairs”.

The potency of modern missiles and bombs has reached a level where each side seeks to deliver the first strike to prevent retaliation. Simultaneously, military operations are expanding geographically while requiring fewer troops and machines. Historically, the footprint of combat forces has shrunk over time. For instance, in 1815, a military division of 15,000–20,000 personnel occupied roughly 25 square miles. By 2015, the same division might require over 100 square miles, with forces operating in agile, dispersed units, rendering the traditional “front line” obsolete.

Given the difficulty of intercepting missiles, ports, airbases, and fixed installations are increasingly vulnerable. Maintaining supply chains will be challenging, compelling expeditionary forces to carry larger provisions.

Consequently, mobility and maneuverability will surpass armor in strategic importance.

Conclusion

The transformations in military affairs over the past three decades have demonstrated that the information revolution is not merely a technical enhancement, but a fundamental restructuring of the philosophy of war, command paradigms, and engagement models. Warfare is no longer conducted solely through heavy weaponry, but through integrated cognitive systems that employ artificial intelligence, sensor networks, and cybernetic control.

Real-world experiences -such as the Russia–Ukraine war (2022)- have confirmed the strategic impact of real-time aerial imagery and data processing in shaping battlefield decisions, as well as influencing the accompanying political and diplomatic dynamics. Similarly, the deployment of drones in the Azerbaijan–Armenia conflict exemplifies a new mode of engagement that minimizes direct contact and maximizes digital targeting efficiency.

These and other examples affirm that the transformation extends beyond weaponry to encompass the conceptual dimensions of combat doctrine, institutional power relations, and decision-making pathways. This necessitates a careful reexamination of the role of the military individual within this emerging techno-cognitive framework.

In the coming decades, we are likely to witness a near-complete fusion of informational and combat capabilities through what is known as *predictive command*, a model that leverages artificial intelligence to simulate war scenarios before they unfold.

Military units may be redefined to include digital analytical teams capable of virtual intervention with the same strategic weight as conventional combat battalions.

Cyber space will emerge as an autonomous theater of conflict, where battles over data and critical systems are waged using tools of digital disruption and systematic attacks on intelligent infrastructures.

Research Recommendations:

- Recalibrate traditional military concepts to align with the logic of networks and information, not merely firepower.
- Support interdisciplinary military studies that integrate technology, psychology, and strategic management.
- Establish digital military training centers that simulate cyber warfare and real-time command environments.
- Adopt big data analytics systems to enhance operational decision-making and field responsiveness.
- Develop ethical and legal frameworks to regulate the use of artificial intelligence in warfare and clarify command responsibilities in digital environments.

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