

A Revolution in Military Affairs and Modern Armaments in the Russia-Ukraine War of 2022-2023

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The Russia-Ukraine conflict in 2022-2023 unfolds against the backdrop of a rapidly evolving military technological landscape, characterized by advancements in artificial intelligence, cyber capabilities, and autonomous systems. This abstract delves into the intersection of these technological developments and their profound implications on the dynamics of the ongoing war. The study examines the role of emerging technologies in shaping the strategies and tactics employed by both Russia and Ukraine. It explores how artificial intelligence-driven command and control systems, unmanned aerial vehicles, and cyber operations have altered the traditional balance of power, offering new opportunities and challenges for both belligerents. The research draws on a comprehensive analysis of open-source information, military doctrines, to provide insights into the ways in which military technological revolution has influenced the Russia-Ukraine war.

Keywords: War, conflict, military, Nuclear Arms, Asymmetric Warfare.

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Introduction

In the vast and ever-evolving landscape of warfare, the role of modern military technologies has become increasingly prominent, transforming the nature of conflicts around the world. As we stand on the precipice of a new era, it is imperative to examine the intricate interplay between cutting-edge military technologies and the conduct of modern conflicts. The advent of these technologies has not only revolutionized the way wars are fought but also reshaped the geopolitical landscape and the global balance of power. From advanced weaponry to cyber

warfare and artificial intelligence, the spectrum of modern military technologies is wide-ranging and profoundly influential. This paper seeks to explore the multifaceted roles and implications of modern military technologies in contemporary conflicts, delving into their impact on strategy, tactics, and the very nature of warfare itself.

Over the centuries, warfare has been subject to continuous innovation, adapting to the ever-changing tools and strategies available to those who wage it. From the use of bronze weapons in ancient civilizations to the introduction of gunpowder and industrialization in the 19th century, the evolution of military technology has shaped the course of history. The 21st century has seen remarkable advancements in military technologies, and this trend is poised to accelerate further. These innovations not only redefine the parameters of warfare but also challenge the existing international norms and legal frameworks governing armed conflicts. In this context, the use of modern military technologies has ushered in a new era of warfare, one where the lines between conventional and unconventional warfare are increasingly blurred.

This paper is organized into several sections, each addressing a distinct aspect of the role of modern military technologies in modern conflicts. We will begin by examining the evolution of military technology and its historical significance, providing a foundational understanding of the topic. Following this, we will delve into the contemporary landscape of military technologies, focusing on key developments in areas such as cyber warfare, artificial intelligence, unmanned systems, and space-based capabilities. Each of these areas is emblematic of the profound shifts occurring in the realm of modern warfare.

The global order is increasingly shaped by the capabilities and intentions of states, non-state actors, and even individuals who have access to advanced military technologies. We will assess the potential for future conflicts, the need for international cooperation, and the challenges posed by the rapid diffusion of technology to non-state actors.

In this era of rapid technological advancement, understanding the role of modern military technologies in modern conflicts is not just an academic exercise but a matter of utmost importance for policymakers, military strategists, and the general public alike. As these technologies continue to evolve, the way we perceive, prepare for, and ultimately engage in conflicts will be profoundly affected. The path forward is uncertain, but by examining the multifaceted role of modern military technologies, we can better navigate the complexities of this new era in warfare.

Historical context

To grasp the significance of modern military technologies in contemporary conflicts, it is essential to contextualize their development within the historical evolution of warfare. Throughout human history, the progression of military technology has been intrinsically linked to the changing nature of conflicts. From the early innovations in weaponry, such as the transition from stone tools to bronze weapons, to the introduction of gunpowder in the late Middle Ages, technological advancements have consistently altered the conduct and outcomes of wars.

The advent of gunpowder, for instance, heralded a transformation in the character of warfare, giving rise to artillery and firearms. It not only altered the dynamics of battle but also shifted the balance of power among nations. Similarly, the Industrial Revolution in the 19th century brought about significant changes in military technology, as the mass production of weapons and the development of steam power gave rise to modern armies and navies. These developments, along with advances in communication and transportation, marked a shift from localized conflicts to global warfare.

Ancient and Classical Periods: The earliest forms of warfare were characterized by primitive weapons such as spears, slings, and bows. As societies evolved, they began to forge bronze weapons, leading to significant advancements in offensive and defensive capabilities. This transition marked a technological leap, enabling more effective and lethal warfare (Guilmartin, 2023).

Middle Ages and Gunpowder Revolution: The Middle Ages saw the emergence of medieval weaponry like the longbow and trebuchet. However, the most revolutionary change came with the introduction of gunpowder in the late medieval period. The development of cannons and firearms marked a turning point in military technology, transforming the way wars were waged. Gunpowder gave rise to artillery and, eventually, musketry, leading to the end of feudal armored knights as the dominant force on the battlefield.

Industrial Revolution: The 19th century brought about the Industrial Revolution, which not only transformed economies but also military capabilities. This period witnessed innovations like rifled muskets, breech-loading artillery, and the widespread use of steam power in naval vessels. The industrialization of warfare drastically increased the scale of conflict, leading to large standing armies and global colonial empires (Congressional Research Service, 2021).

World War I and World War II: The two World Wars of the 20th century were characterized by significant technological advancements. These conflicts saw the introduction of tanks, aircraft, submarines, chemical warfare, and, most notably, the atomic bomb. The scale of destruction and the introduction of nuclear weapons fundamentally changed the calculus of warfare and international relations.

Cold War and Nuclear Arms Race: The post-World War II period was dominated by the Cold War, where the United States and the Soviet Union engaged in a nuclear arms race. The development and proliferation of nuclear weapons had a profound impact on the balance of power and deterrence. It also gave rise to the concept of Mutually Assured Destruction (MAD), where both superpowers refrained from direct conflict due to the catastrophic consequences of nuclear war. Late 20th Century and Information Technology: The late 20th century witnessed the integration of information technology into military operations. Advanced communication systems, satellite technology, and the use of computers for command and control transformed the conduct of warfare. The Gulf War in 1990-91 marked a notable example of how precision-guided munitions and real-time information sharing reshaped military operations (Hacker, 1994).

21st Century Technological Advancements: The 21st century has seen a proliferation of advanced military technologies. Cyber warfare has emerged as a new dimension of conflict, challenging traditional notions of warfare. Drones and unmanned systems have become central to modern militaries, providing enhanced capabilities for reconnaissance, surveillance, and even strike missions. The rise of artificial intelligence has further transformed the landscape of military operations. The historical context of military technology illustrates a pattern of innovation and adaptation, where new technologies have continually influenced the conduct of wars. This evolution has often been marked by a shift from mass and firepower to precision, information dominance, and the integration of various domains of warfare (Schmid, 2006).

Understanding this historical context is crucial for appreciating the significance of modern military technologies in contemporary conflicts. The advancements of the 21st century, from cyber warfare to AI-driven systems, are part of an ongoing narrative of change in military affairs. They represent the latest chapter in the long history of human conflict, with profound implications for the way wars are fought, diplomacy is conducted, and global security is maintained.

The Contemporary Landscape of Military Technologies: The contemporary landscape of military technologies is vast and varied, encompassing a wide range of innovations that have transformed the nature of modern conflicts. The most prominent areas of technological development include:

Cyber Warfare: The advent of the digital age has brought about a new dimension of warfare, where conflicts are fought in the realm of information and communication. Cyber warfare involves the use of computer systems to disrupt, infiltrate, or sabotage the operations of adversaries. Nation-states and non-state actors alike are increasingly turning to cyberattacks as a means of exerting influence, stealing secrets, and disrupting critical infrastructure.

Artificial Intelligence (AI): AI has found applications in military technologies in areas such as autonomous systems, predictive analytics, and decision support. Machine learning algorithms can enhance intelligence and reconnaissance capabilities, assist in identifying threats, and optimize logistical and tactical decision-making.

Unmanned Systems: The use of unmanned aerial vehicles (UAVs or drones) and ground-based robotic systems has become prevalent in modern military operations. These systems are employed for reconnaissance, surveillance, target acquisition, and even strike missions. They offer the advantage of reducing the risk to human personnel while extending

Space-Based Capabilities: Satellites play a critical role in modern military operations by providing global communications, navigation, and surveillance capabilities. Space-based technologies also facilitate precision-guided munitions and real-time battlefield awareness.

These technological advancements have not only reshaped the way conflicts are waged but have also had a profound impact on strategic thinking and the structure of modern armed forces. The concept of “network-centric warfare,” where interconnected systems and sensors provide real-time information and decision-making capabilities, has become a cornerstone of modern military doctrine. This approach emphasizes agility, precision, and information dominance as key components of success in contemporary conflicts.

Impact on Military Strategy

The introduction of modern military technologies has led to a paradigm shift in military strategy and doctrine. Traditional principles of warfare, which emphasized mass and firepower, have been adapted to incorporate the capabilities offered by these innovations. Key ways in which technology has influenced military strategy include:

Asymmetric Warfare: While technology has granted advanced military capabilities to nation-states, it has also empowered non-state actors and insurgent groups to wage asymmetric warfare. These groups leverage technology for propaganda, recruitment, and the development of low-cost, high-impact weaponry.

Asymmetric warfare, characterized by its inherent power imbalance and the unconventional tactics employed by the weaker party, has been significantly influenced by modern military technologies. The evolution of military technology has allowed both conventional forces and non-state actors to adapt and innovate in ways that reshape the dynamics of asymmetric conflicts. In this context, modern military technologies play a critical role in determining the outcomes of such conflicts and influencing the strategies and tactics employed. Here, we explore the role of modern military technologies in asymmetric warfare and the ways in which these technologies have altered the landscape of conflict (Buffaloe, 2006).

1. Precision-Guided Munitions (PGMs): Modern military technologies have introduced highly accurate and precise weapons systems, including guided missiles, smart bombs, and drones. These PGMs enable conventional forces to target specific locations or individuals, minimizing collateral damage and reducing the risk of harming civilians. In asymmetric warfare, this technology allows the stronger party to engage in precise strikes against insurgent groups or non-state actors while attempting to limit the damage to the surrounding environment.

2. Surveillance and Reconnaissance: Advanced surveillance technologies, such as unmanned aerial vehicles (UAVs) or drones, provide real-time situational awareness to conventional forces. These technologies are valuable for monitoring insurgent activities, tracking movements, and gathering intelligence. In asymmetric conflicts, surveillance and reconnaissance play a crucial role in identifying and neutralizing threats posed by non-state actors.

3. Electronic Warfare: Modern electronic warfare capabilities have expanded the toolkit of conventional forces in asymmetric conflicts. These technologies can disrupt enemy communications, intercept and decode signals, and even disable the electronic systems used by non-state actors. Electronic countermeasures can impede the ability of insurgent groups to coordinate and execute their operations effectively.

4. Cyber Warfare: Asymmetric warfare has seen the integration of cyber warfare into the conflict landscape. Both state and non-state actors employ cyberattacks to disrupt, infiltrate, or sabotage the operations of their adversaries. Conventional forces often use cyber capabilities to target the communication and command structures of non-state actors, while the weaker party may utilize cyberattacks to disrupt critical infrastructure of the stronger adversary.

5. Unmanned Systems: Drones and other unmanned systems are valuable assets in asymmetric warfare. Conventional forces use them for reconnaissance and surveillance, as well as targeted strikes against non-state actors. Non-state actors also employ small, commercially available drones for reconnaissance and propaganda purposes. The utilization of these unmanned systems has reshaped the battlefield, providing a tactical advantage to both sides.

6. Counterinsurgency Technologies: Modern military technologies have led to the development of specialized counterinsurgency tools, such as ground-penetrating radar, mine-resistant vehicles, and counter-IED (improvised explosive device) technologies. These advancements help protect conventional forces against the unconventional tactics of non-state actors, who often employ asymmetric threats like IEDs.

7. Intelligence Fusion and Analysis: Advanced computing and artificial intelligence technologies have significantly enhanced the processing and analysis of vast amounts of intelligence data. These capabilities aid conventional forces in identifying patterns, detecting threats, and predicting the movements of non-state actors. In asymmetric conflicts, the ability to analyze and act on intelligence quickly can be a game-changer.

8. Psychological Operations: Modern technologies play a crucial role in shaping the perception and narrative of asymmetric conflicts. Both conventional forces and non-state actors use social media, propaganda, and information warfare to influence public opinion, recruit supporters, and gain a psychological advantage. The speed and reach of modern communication technologies have made this dimension of asymmetric warfare even more influential.

9. Urban Warfare Technologies: Many asymmetric conflicts take place in urban environments. Modern military technologies, including precision munitions, urban combat suits, and building-clearing robots, have been developed to enhance the capabilities of conventional forces in these complex, densely populated settings. In summary, modern military technologies have transformed the dynamics of asymmetric warfare by providing both conventional forces

and non-state actors with new tools and capabilities. These technologies have influenced the strategies and tactics employed by all parties involved, reshaping the nature of conflicts in the 21st century. The role of technology in asymmetric warfare highlights the need for continuous adaptation and innovation in military operations and underscores the complex interplay between power, tactics, and the tools of war in the modern age.

Revolution in Military Affairs (RMA)

The RMA concept refers to a significant change in the character of warfare resulting from the innovative use of technology. The integration of technology into military operations is seen as a key driver of RMAs, altering the nature of conflict and military capabilities.

The Revolution in Military Affairs (RMA) The Revolution in Military Affairs (RMA) is a concept that has gained prominence in military thinking since the late 20th century. It refers to a significant transformation in the character of warfare resulting from innovative changes in military technology, doctrine, strategy, and organization. The ongoing development of modern military technologies has played a pivotal role in driving and sustaining the RMA. In this discussion, we will delve into the role of modern military technologies in the RMA, highlighting their influence on military operations, strategies, and the broader geopolitical landscape (Chapman, 2003).

1. Precision Engagement: One of the central aspects of the RMA is precision engagement, made possible by modern military technologies. Advanced targeting systems, precision-guided munitions, and smart bombs have dramatically improved the accuracy of striking targets. This precision reduces collateral damage and allows military forces to engage specific objectives with a high degree of accuracy. The ability to hit high-value targets while minimizing harm to non-combatants is a fundamental shift in modern warfare, influenced by advancements in technology.

2. Network-Centric Warfare: Modern military technologies have enabled the development of network-centric warfare (NCW), a concept at the heart of the RMA. NCW emphasizes the integration of sensors, communication systems, and decision-making processes to create a real-time, interconnected battlefield. Information is shared rapidly among different platforms and units, enhancing situational awareness, improving coordination, and accelerating decision-making. This has fundamentally altered the way military operations are conducted and has improved the efficiency and effectiveness of modern armed forces.

3. Information Dominance: The RMA has ushered in an era of information dominance, where the ability to collect, analyze, and disseminate information is a critical component of military operations. Modern military technologies, including reconnaissance satellites, unmanned aerial vehicles (UAVs), and surveillance systems, have expanded the scope and reach of intelligence, surveillance, and reconnaissance (ISR) capabilities. This information dominance provides a significant advantage in understanding and responding to the evolving battlefield.

4. Unmanned Systems: The development and integration of unmanned systems, such as drones and robotic vehicles, are a hallmark of the RMA. These technologies extend the operational reach of military forces, reduce the risk to human personnel, and enable persistent surveillance and reconnaissance. Unmanned systems are used for tasks ranging from intelligence-gathering to targeted strikes, and they have become an integral part of modern military operations.

5. Cyber Warfare: The RMA has witnessed the emergence of cyber warfare as a critical domain of conflict. Modern military technologies in the form of sophisticated cyber tools and capabilities enable states and non-state actors to engage in disruptive activities, espionage, and

sabotage in the digital realm. Cyber warfare has the potential to paralyze critical infrastructure, disrupt communication networks, and influence the course of conflicts.

6. Artificial Intelligence (AI): The application of AI in military technologies is revolutionizing various aspects of warfare. AI-driven systems enhance decision-making, predictive analytics, and autonomous operations. This technology allows military forces to process vast amounts of data, recognize patterns, and optimize logistical and tactical decisions. AI also plays a role in the development of autonomous weapons systems.

7. Space-Based Capabilities: Space-based technologies, including satellites, have become essential for modern military operations. They enable global communication, navigation, and surveillance capabilities. Military forces rely on these space-based systems for real-time information, precision-guided munitions, and coordination of operations on a global scale. The integration of space into military operations is a significant dimension of the RMA.

8. Anti-Access/Area Denial (A2/AD) Capabilities: Modern military technologies have contributed to the development of A2/AD strategies, which are designed to prevent or restrict the access of opposing forces to specific areas. A2/AD capabilities, which include advanced air defense systems and long-range precision strike capabilities, have the potential to alter the dynamics of conflicts by limiting the freedom of movement of conventional forces. The RMA, driven by modern military technologies, has fundamentally transformed the way wars are fought and has had a profound impact on military strategies, tactics, and the global balance of power. The integration of these technologies into military operations has made armed forces more agile, precise, and interconnected. However, it has.

The RMA, driven by modern military technologies, has fundamentally transformed the way wars are fought and has had a profound impact on military strategies, tactics, and the global balance of power (Morgan, 2008).

The integration of these technologies into military operations has made armed forces more agile, precise, and interconnected. However, it has also raised complex ethical, legal, and strategic challenges that require careful consideration. Modern military technologies have been pivotal in driving the Revolution in Military Affairs, reshaping the character of warfare and influencing the strategies and capabilities of modern armed forces. The ongoing evolution of these technologies ensures that the RMA remains an enduring and dynamic aspect of contemporary military thinking and practice (Tilford, 1995).

Russia-Ukraine war of 2022-2023

Russia's invasion of Ukraine – began on February 24, 2022. The invasion caused Europe's largest displacement crisis since World War II, more than 6.4 million Ukrainians fled the country, and a third of the country's population became internally displaced. The invasion also caused global food shortages.

In 2014, Russia invaded and annexed Crimea, and Russian-backed separatists seized parts of Donbas in southeastern Ukraine, particularly the Luhansk and Donetsk regions, leading to war in the local region. In 2021, Russia began a massive military buildup near the border with Ukraine, amassing more than 190,000 troops and their equipment. In a televised address, Vladimir Putin expressed irredentist views, questioned Ukraine's right to be a state, and falsely claimed that Ukraine was ruled by neo-Nazis who persecuted and punished Russians on ethnic grounds. On February 21, 2022, Russia recognized the Donetsk People's Republic and the Luhansk People's Republic, two self-recognized quasi-states in Donbas. Later today, the Russian Federation

Council authorized the use of military force by the President, and Russian forces entered Donbas (Gjoreski, 2023).

The invasion began on February 24, when Putin announced a “special military operation” to “demilitarize and denazify” Ukraine. Within minutes, air and missile attacks began in all regions of Ukraine, including the capital, Kyiv. This was followed by ground invasions from several directions. Ukrainian President Volodymyr Zelensky declared martial law and general mobilization for all men between the ages of 18 and 60, who were banned from leaving the country. The Russian offensive was initially launched on the Northern Front from Belarus towards Kyiv, on the Samkheti Front from Crimea, on the North-Eastern Front and on the Eastern Front from Donetsk and Luhansk. During March, the Russian adva

nce in the direction of Kyiv were fruitless. As a result of heavy losses and strong resistance, Russian forces left the Kyiv region on April 3. A renewed offensive from Donbas began on 19 April and continued slowly, with Luhansk Oblast fully captured on 3 July, while other fronts were immobilized while Russia continued to bomb civilian and military targets far from the front line, including Kyiv, Lviv, in Odesa and Kremenchuk, among others.

The invasion was widely condemned internationally. The UN General Assembly passed a resolution condemning the invasion and demanding that Russia completely withdraw its troops from the territory of Ukraine. The International Court of Justice ordered Russia to stop military operations and the Council of Europe expelled Russia. Many countries have imposed sanctions on Russia, which have affected the Russian and global economies, and provided military and humanitarian support to Ukraine. Protests started in different parts of the world; In Russia, demonstrators were arrested and censorship increased, the words “war” and “invasion” were banned. The International Criminal Court has been investigating crimes against humanity in Ukraine since 2013, and is also investigating war crimes committed in the 2022 invasion (Kofman, 2022).

Military technology

Ukraine’s advantage in the conflict with Russia is largely based on the use of advanced technological developments. In cooperation with NATO analysts, the Ukrainian Armed Forces are able to monitor enemy movements, predict their actions and model combat strategies.

Drone warfare

Autonomous and unmanned systems are considered the future of warfare. On the other hand, drones are already part of warfare. New technologies are changing the way humans and machines interact and work together. More drones were used in the Russia-Ukraine war than in any previous war. Since the start of the war, more than 60 Russian assets have been destroyed by drones. They play a major, but not decisive, role in the success of the Armed Forces of Ukraine. There are different types of drones used by both sides. The most prominent medium-altitude long-range drone that has played a significant role in Ukraine’s operational success is the Turkish Bayraktar TB2. It is managed from land. Bayraktar can carry different types of missiles, find the target and destroy it. Also used for surveillance and intelligence (Kasapoglu, 2022).

Another, most commonly used unmanned aerial vehicle in the Russo-Ukraine war is the US-made Switchblade and the Russian Lanset, also known as kamikaze drones. A person can carry a drone with a backpack and search for targets. When necessary, the drone collides with the target, as a result of which the warhead, which is used to transport the drone, explodes (Pong, 2022).

Although the drones mentioned above are very effective, they are relatively expensive. The UAVs most commonly used by Ukrainian soldiers are simple, commercial drones with integrated high-definition cameras that can be paired with a smartphone and that can be purchased on

e-commerce platforms. Soldiers use them for reconnaissance and surveillance, keeping them one step ahead of the enemy.

Artificial intelligence

In the age of information and social media, a person can get a huge amount of information at the click of a phone. The great military strategist Sun Tzu said, “Know your enemy, know yourself, in hundreds of battles you will never be in danger.” Obviously, Sun Tzu never imagined the existence of the Internet or other technologies that intelligence services use to obtain the data they want. Nevertheless, the idea of seeking information and understanding the enemy’s capabilities remains unchanged. Currently, the Armed Forces of Ukraine can be considered one of the most effective and capable armed forces on the planet. The main reason for this opinion is that Ukrainians have access to intelligence and data collected from the most powerful intelligence services in the world.

Equally important is the fact that Ukrainians themselves are successfully using advanced artificial intelligence tools on publicly available images and generating critical information. Ukraine cooperates with Clearview AI. He offers them Ukrainian software that uses facial recognition to find the social media profiles of dead soldiers. The Ukrainian side actively uses encrypted information distributed by Russian soldiers. AI-focused tech company Primer has modified its commercial AI-enabled voice transcription and translation service so that it can process Russian communications and automatically highlight Information needed for the Armed Forces of Ukraine in a searchable text database (Kirdemir, 2019).

Conclusions

In the complex and dynamic landscape of modern warfare, the role of military technologies has emerged as a defining force, reshaping strategies, tactics, and the very nature of conflicts. This exploration has taken us through the historical evolution of military technology, the contemporary landscape of modern warfare technologies, and their impact on both conventional and asymmetric warfare. From precision-guided munitions to cyber warfare, artificial intelligence, and space-based capabilities, the spectrum of modern military technologies is vast, each facet playing a crucial role in shaping the future of global security.

As we reflect on the historical context, it is evident that warfare has been a continuum of adaptation and innovation. The transition from bronze weapons to gunpowder, the industrial revolution, and the world wars—all marked significant shifts in the character of conflicts. The 21st century, with its rapid advancements in technology, has brought about a new era, underpinned by the Revolution in Military Affairs (RMA). This ongoing revolution is characterized by the integration of information technologies, precision warfare, and the interconnectedness of military systems.

The contemporary landscape of military technologies is defined by its breadth and sophistication. Cyber warfare, a relatively recent addition to the arsenal of nations, has become a formidable tool, blurring the lines between war and peace. Artificial intelligence, with its potential to revolutionize decision-making processes, is driving advancements in autonomous systems, predictive analytics, and the very concept of military strategy. Space, once considered the final frontier, has become a domain for strategic competition and technological innovation.

The impact of modern military technologies on conventional warfare is profound. Precision-guided munitions have redefined the meaning of accuracy on the battlefield, allowing for surgical strikes and reducing collateral damage. Network-centric warfare has transformed

how military forces operate, emphasizing real-time information sharing and interoperability. Unmanned systems have provided a new dimension to reconnaissance, surveillance, and strike capabilities, reducing risks to human personnel. In the realm of asymmetric warfare, modern military technologies have both empowered non-state actors and provided tools for states to counter asymmetric threats. Precision strikes, advanced surveillance, and cyber capabilities have become key components in dealing with unconventional challenges. However, the very nature of asymmetric warfare also means that non-state actors, insurgencies, and terrorist groups leverage technology to level the playing field, using asymmetric advantages such as guerrilla tactics, propaganda, and cyber attacks.

Ethical and legal dimensions have become increasingly complex in the age of modern military technologies. The advent of lethal autonomous weapons systems (LAWS) raises fundamental questions about the role of machines in making life-and-death decisions. Cyber operations challenge traditional notions of sovereignty and attribution, leading to debates about the rules governing this virtual battlefield. Striking the balance between military necessity and humanitarian considerations becomes more intricate as technology allows for greater precision but also introduces new risks. The global implications of modern military technologies extend beyond the battlefield. Proliferation, arms races, and the erosion of traditional deterrence mechanisms pose challenges to international stability. The interconnectedness of the global economy and critical infrastructure means that conflicts can have cascading effects on security and economic well-being. Geopolitical alliances are shifting based on shared technological interests, and the militarization of space introduces new complexities in the strategic calculus of nations.

In conclusion, the role of modern military technologies in modern conflicts is both transformative and challenging. It reshapes not only how wars are fought but also the very essence of conflict and cooperation among nations. The Revolution in Military Affairs, driven by these technologies, marks a pivotal moment in the history of warfare—a moment where the fusion of technology, strategy, and ethics will determine the course of global security. As we navigate this uncharted territory, the lessons of history, the realities of contemporary conflicts, and the ethical imperatives of the future must guide our approach to harnessing the potential of modern military technologies for the greater benefit of humanity. The development of military technology was expected to affect the Russian-Ukrainian conflict and its continuation, modern Western and American military equipment gave Ukraine the opportunity to resist the Russian army, and tactical and technological superiority appeared on the side of the Ukrainian armed forces. In the Russia-Ukraine war, the use of modern weapons, such as unmanned aerial vehicles, precision targeting missiles and information processing methods through artificial intelligence, certainly influenced the course of the war.

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