

EVOLUTION AND PERSPECTIVES OF THE FOURTH GENERATION OF WARFARE

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Abstract: Fourth generation warfare is a constant conflict, between war and peace, combatants and citizens. This conflict as an act of war was first established during the last two decades from XX-th century from the United States. This generation of warfare is becoming popular due to Iraq war and terrorist attacks on a global scale. The scientific theory and later the models of practical implementation of the methods of the fourth generation of warfare, have transformed several times over the past century, with the main focus of scientific analysis of the transformation of this type of warfare being based on how this type of warfare affects the strategic and operational goals of the critical structure of the great powers: United States, China and Russia.

The history of conflicts and wars represents crucial cornerstone for defining strategic national and military documents. This document defines the following generations of warfare:

First generation of warfare was focused on using numerous army forces- meaning this type of warfare basically involved the use of large military force or numerous armies. The next generation of war is dedicated to massive artillery systems than large, numbered Armies. Another warfare generation after the previous above was dedicated to maneuvers, which overall had improved the tactical performance and the efficiency of the battle forces. Finally, fourth warfare generation represents insurgency which uses all instruments of power: diplomacy, information, economy, combatants and advanced information technology which is tough mission for neutralizing this kind of warfare generation.

The fourth generation of warfare represent an “evolved form of insurgency”. In this generation of warfare, the distinction or difference between peace and war is almost non-existent. Using unproportional warfare methods makes this type of conflict undefinable with unspecific front sides of the enemies. Theory of this warfare generation went through a second reincarnation when it was concluded that this type of warfare drastically deviates conventional wars, which were defined in previous generations of warfare.

The USA terrorist act from 2001, represent a cornerstone for further scientific research of this warfare generation, where methods achieved by "Al Qaeda" is a step closer for successful resistant to this kind of conflict. The paper aims to provide a historical retrospective of the development of the fourth generation of warfare and perspectives for its higher stage of development in the fifth generation of warfare.

Keywords: evolution, perspective, fourth generation of warfare, Al-Qaeda, insurgency

1. INTRODUCTION

The first type of war uses numerous forces or large Army. This generation of warfare experienced its culmination with Napoleon Bonaparte (Napoleon, 2019). This type of war was more advanced and developed during XVIIth to XXth century.

In terms of methods for deploying army forces the structure of columns and rows was very important for further battle coordination and overall efficiency (Murray & Mansoor 2024). The warfare tactics of this generation of warfare started to fade away in the period of industrialization and advanced information technology. Also, in the time of advanced artillery systems. The symmetrical order of rows and columns of this warfare generation and their arrangement on the battlefield with strictly defined military rules, norms and doctrines that were established during 1648. The above-mentioned principles of warfare in the first generation were applied until the end of the Crimean War (1853-1856) or more specifically until 1860. The relevance of the first generation of warfare stems from the fact that the battlefield had a frontal arrangement of the opposing military parties. The second generation of warfare is a response to the contradiction between the established frontal order of the opposing military forces and the conditions of warfare established by the military environment. It was initially developed by the French army during and after World War I. Second-generation warfare requires using more artillery systems as a dominant factor for efficiency of the battle overcame. The attraction of advanced artillery and the doctrine were summarized from the French military forces and conquerors.

Overall, the artillery systems and fire efficiency were coordinated with other military branches like infantry and armored personal carrier units. All this with the unity command of military leaders represents well-coordinated military activity. The focus was on rules and procedures.

Coordinated activities were more imperative instead of initiative. Initiative was unnecessary compared to coordination of all military activities. The next generation after the second warfare generation rises during (1914-1918) year and was product of advanced German military tactics. This type of warfare represents “thunder war” or quick war with full spectrum of offensive activities. Operation plans of this type of war give advantage of penetration and neutralization of adversary’s frontal areas and then the other areas of adversary’ defense. Defensive methods of this war seek to find the current position of the adversary to neutralize them. The tactics and other procedures in this type of warfare have offensive outward impact of overall military engagements rather than inward activities (Hoffman, 2007). Fast and efficient action is far more crucial than other military engagements.

2. HISTORY OF WARFARE

The fourth generation of warfare represents an irregular warfare which has "evolved form of insurgency". In this generation of warfare, the distinction or difference between peace and war is almost non-existent. The use of nonlinear warfare tactics represents that this type of war has not marked front lines.

This type of war has been established during the last two decades from the XX-th century, when the Army experts and scientific circles deal with the study of military sciences and war as a social phenomenon, it represented a "kind of enigma" to deviate from conventional to unconventional type of conflict, strictly focus of untraditional warfare tactics.

Fourth generation conflict went through a second reincarnation when it was concluded that drastically deviates conventional forms of war, which were defined in previous generations of warfare (Artelli & Deckro, 2008). The main point for crucial research activity is terrorist activities from 11-th September 2001 made in USA. "Al Qaeda" achieved all their strictly planned and organized activities in the USA, through the destruction of critical infrastructure such as one of the most important buildings that were organized by "Al Qaeda" caused (NATO Strategic Communications Centre of Excellence, 2024).

Figure 1: Generations of warfare



Source: Artelli, M. J., & Deckro, R. F. (2008). Fourth generation operations: principles for the ‘Long War.’ Small Wars & Insurgencies, 19(2), 221–237. <https://doi.org/10.1080/09592310802061372>

With the technological development of weapons throughout history, the manner of warfare and the strategy of warfare change their nature. These changes are significantly accelerated by the major geopolitical changes that occurred in the world with the fall and division of the former Soviet Union, which put an end to the bipolar world (Artelli & Deckro, 2008). In addition, many nations around the world, which for many centuries were exposed to colonial rule by European great powers, found an appropriate time frame to form new small states. Global changes in the world have awakened the long-standing ideological nationalist goals of the leaders of smaller states, who during the Cold War period (1945-90) were unable to realize their ideals and goals.

Modern wars don't have separation between "civilians" versus "soldiers". Actions take place simultaneously throughout the entire space in which all participants, including the state, operate. It is a war in which cultures can clash. It represents coordinated activities of the attacked state with use of political, military and economic sanctions to overcome the adversary. This can be achieved also with coordinated acts of states, NGOs and international

organizations. Having in mind, all of this we have mentioned above the advanced information technology, globalization, ethnic, interethnic, religious and other reactionary movements were in favor of the easier and faster realization of the ideological matrix of nationalist leaders through the veil of terrorist organizations around the world. When military scientists and experts gave the name the fourth generation of warfare, they proceeded from the starting premise of defining modern conflicts and wars in the XXI-st century.

3. FUTURE WARS

In this type of warfare, Army strength has not crucial importance like in previous types of warfare, the main instruments of power in this generation of warfare are diplomatic, informational, economic and finally, military instruments of power. The main causes of this generation of warfare are the loss of the monopoly of the nation-state due to the continuous intensity of violence of all kinds, the increase in historical, identical conflicts after the Second World War and the globalizations effects. There is no doubt that the nature of war is changing. But, on the other hand, we should also emphasize that new ideas for changing the way of warfare are also a product of important developments in the history of warfare, where the analysis of wars won and lost and the rapid development of military technology have changed the perception of war as a social phenomenon (Rid & Krepinevich, 2024).

The historical development of warfare has proven that conventional (traditional) warfare is unsustainable in times of globalization and the far-reaching destructive effects of modern weapons. Conventional warfare as a method of warfare in the present we live in and the future that follows is excluded or reduced to a minimum, on the other hand, the implementation of modern military operations today and in the future will be based on warfare through: the implementation of special and secret military operations, cyber warfare, asymmetric strategies and tactics that are increasingly dominating day by day. Advanced information technology, the economy and the rapid transfer of information on a global level represent a significant tool for the so-called state actors, i.e. legitimate military forces of the states in the world, never less represent great impact of terrorist gangs enabling this gangs significantly to recover their strength and with that to have better primary positions to overcome their obstacles. To be able to more easily understand the operational phases, we must analyze the nature for this generation of warfare in more detail.

This type of war represents tick line between conflict and freedom, which are fragile and alternately changing, thereby creating permanent intensity of violence, fear and uncertainty on the people of the state, where this generation of warfare has been carried out. By its nature, this war represents nonlinear and asymmetric conflict with most often undefined front lines and battlefields.

In this type of conflict, we don't have clear distinction between the civilian population and the military force, i.e. soldiers. The nature of the enemy – This type of warfare directly deals with people and this by influencing their perceptions, for the perpetrator of these actions, or so-called "psychological operations", to realize his idea or achieve the predetermined goal.

Time frame – This type of conflict represents a spectrum of full-scale longstanding war, previously meaning that this conflict which can rise to war could last decades opposite of traditional war described in previous section of this article. In the conventional or traditional war, defeat and victory are also well defined. In this fourth-generation conflict victory or defeat are never defined.

Tactics and instruments of power – In this type of warfare, in which terrorist actions represent a dominant segment of the realization of this type of warfare, the method of low-intensity conflicts is also applied (Hammes, 2006). All this is applied because the opposing parties do not have a clearly defined battlefield and strictly defined military forces that they will use.

This type of war represents a choice from transnational international terrorist organizations, i.e. non-state actors who use terrorist activities as the most appropriate and easily applicable tactic to be able to successfully oppose the legitimate military forces of the state that is their primary target. On the other hand, we should clearly state that the domination of terrorist activities from the terrorist groups is only a tool, i.e. an instrument for implementing and realizing the pre-determined agenda, i.e. the end goal of non-state actors (Krepinevich, 2023).

Fourth Generation Warfare (4GW), characterized by decentralized networks, psychological dominance, and the blurring of war and peace, is evolving rapidly in response to technological innovation, geopolitical fragmentation, and societal vulnerabilities. As we move deeper into the XXI-st century, 4GW will increasingly leverage emerging technologies, exploit cognitive vulnerabilities, and challenge state-centric security paradigms. Its future trajectory suggests not a new "generation" but a radical hybridization of tactics, domains, and actors, demanding reimagined responses from global powers.

The integration of artificial intelligence (AI), autonomous systems, and cyber capabilities will redefine 4GW's operational landscape. Non-state actors and near-peer adversaries alike will deploy AI-driven disinformation campaigns to polarize societies, erode trust in institutions, and manipulate electoral outcomes (RAND Corporation, 2023). Deep-fake technology, for instance, could fabricate evidence of atrocities or political scandals, trigger civil

unrest or justify intervention. Autonomous drones and swarms—already used by groups like Hezbollah and state proxies—will enable precise, deniable strikes against critical infrastructure or soft targets, minimizing risk to perpetrators². Cyber operations will simultaneously target power grids, financial systems, and supply chains, amplifying chaos without firing a single shot. Crucially, these technologies lower the barrier to entry for 4GW actors. A small cell with access to open-source AI tools or rented botnets can inflict disproportionate damage, by passing traditional military advantages. Fourth generation of warfare will be defined by democratized disruption, where technological access eclipses state monopoly on violence³.

Future 4GW will prioritize cognitive dominance over territorial control. Adversaries will weaponize information ecosystems to fracture societies from within, exploiting pre-existing ethnic, religious, or ideological divides⁴. Social media algorithms, optimized for engagement over truth, will amplify extremist narratives, while state-sponsored trolls flood digital spaces with conspiracy theories to paralyze decision-making. The Russo-Ukrainian War offers a preview: Russia's "reflexive control" tactics—using disinformation to shape enemy perceptions—blended kinetic strikes with psychological operations to undermine Ukrainian morale and Western resolve⁵.

This shift elevates "hearts and minds" campaigns from a supporting effort to the primary objective. Winning 4GW will require controlling not just land or resources, but the narrative. States must invest in counter-messaging, digital literacy, and societal resilience to inoculate populations against manipulation (Kilcullen, 2025).

Conventional militaries face an existential dilemma: adapting to 4GW risks undermining their own legitimacy. Heavy-handed counterinsurgency, mass surveillance, or drone strikes that cause civilian casualties can fuel the very grievances 4GW actors exploit⁷. The U.S. withdrawal from Afghanistan (2021) exemplifies this paradox: technological superiority failed to overcome the Taliban's culturally embedded legitimacy and narrative of resistance. Future state responses will emphasize indirect approaches: Whole-of-Society Integration: Military, diplomatic, intelligence, and development agencies must collaborate to address root causes (e.g., governance failures, economic marginalization). Local Partnerships: Empowering local forces and communities to counter 4GW networks, as seen in the Sahel's G5 Joint Force.

States must abandon the illusion of decisive victory. 4GW conflicts are protracted, evolving struggles for influence where "winning" means managing instability, not eliminating it. The line between 4GW and other warfare forms will dissolve. Near-peer conflicts (e.g., U.S.-China, NATO-Russia) will blend 4GW tactics with conventional and nuclear deterrence—a "hybrid" model where cyberattacks precede missile strikes, and proxy forces fight alongside regular troops. China's "Three Warfare's" doctrine (psychological, media, legal) already merges 4GW's cognitive focus with great-power competition, aiming to subdue Taiwan without invasion (Hoffman, 2023).

Similarly, transnational criminal organizations (e.g., cartels, mafias) will adopt 4GW methods, using corruption, terror, and information control to rival state authorities. This convergence of threats will force security planners to abandon generational silos and adopt integrated, multidomain strategies.

4. CONCLUSION

In the numerous monographs, publications and official doctrinal documents of NATO member states that we used during the preparation of this textbook, primarily the United States, the difference between modern warfare, starting from the fourth and fifth generations and onwards, in relation to the previous three generations of warfare is more: "war of minds versus war of steel". If we analyze the historical development of warfare through the prism of the era of industrialization, the main goal in the first three generations of warfare was to destroy military power and sophisticated combat equipment. From the fourth generation of warfare onwards, the focus of "battlefield gravity" is on the one who managed to find out the weak points of the opponent by breaking into the information systems that contain state secrets of the country that is the opponent's target, and the next goal of the opponent is to change the mind, i.e. the way of thinking of the attacked country (Johnson & Adamsky 2024).

The future of 4GW is not a distant horizon—it is unfolding now. Its evolution will be defined by three imperatives: technology as a double-edged sword: AI and cyber tools will empower both adversaries and defenders, cognitive resilience as national security: societies that withstand information warfare will outlast those that cannot and adapt over annihilation: success lies in managing complexity, not seeking decisive battles. Current 4GW advances are defined by technology democratization, cognitive warfare sophistication and hybrid actor collaboration. The future will see artificial intelligence autonomy and cyber tools further erode state dominance, forcing a shift from "winning wars" to "managing perpetual contestation." Success requires not just military adaptation, but societal resilience, ethical tech governance, and global cooperation against transnational 4GW networks. Its future will test the limits of state power, demanding creativity, ethical clarity and a willingness to confront uncomfortable truths: at the age of fourth generation of warfare security is not about dominance, but about endurance.

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