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Skip navigation and go to page main content Back to Academic Journals Dr. Waseem Ahmad Qureshi Details Faculty editor: Michael Ramsey Publication: International Law Journal Volume: 21 Issue: 1 Start Page: 187Month: December Year: 2019 Type: ArticleInstitutional Repository (IR) location of full article: AbstractThe composition of warfare is changing. There is an increasing transformation in the traditional aspects of waging a war: conventional techniques of warfare are in decline and newer tactics and tools of warfare, such as information warfare, asymmetric warfare, media propaganda, and hybrid warfare, are filling the gap, blurring the lines between combatant and noncombatant, and between wartime and peacetime. The basic framework of modern warfare was elaborated by Carl von Clausewitz in his magnum opus On War. He defined modern warfare between states as “a duel on larger scale,” and explained its purpose as “a continuation of politics by other means,” with its core elements of “rationality of the state, probability in military command, and rage of the population.” Building on Clausewitz’s work, William S. Lind distinguished between four generations of warfare since the Peace of Westphalia in 1648, each generation having its own way of fighting war. This Article intends to explore Lind’s fourth-generation warfare and Daniel H. Abbott’s fifth-generation warfare. It provides different interpretations of fourth-generation warfare (4GW) by several scholars. First, it explains that 4GW is asymmetric warfare fought by nonstate actors and by nonstate cultural groups, where asymmetric warfare and shadow wars are waged by nonstate actors and mercenaries for the political interests of aggressive states. Then, it provides additional interpretations of 4GW, which is often understood as fighting on a moral level employing light infantry. By contrast, other scholars believe that 4GW is fought with the tools of information and technology using cyberspace. Afterwards, this Article explores how to fight 4GW and how it is being fought. The Article also investigates Abbott’s fifth-generation warfare, a war of perceptions, and explains how to fight 5GW and how it is being fought. Furthermore, this Article explains how technological progression is used as a tool of modern warfare. Experience San Diego Majors and Minors Graduate Programs In the realm of warfare, the use of non-kinetic resources is growing with every passing day. In addition to cyberattacks, 5th generation warfare (5GW) involves the spread of misinformation and propaganda with the help of internet, media platforms and artificial intelligence. “Data is the new oil” has become a common refrain as data is a valuable commodity for political gains and monetary benefits. People belonging to the upper strata of society have always been interested in buying media outlets to further increase their social stature. It is due to the power that media offers. Jeff Bezos bought the Washington Post newspaper for \$ 250 million in 2013 and Elon Musk offered \$ 44 billion for buying Twitter. There are myriad ways in which technology can be used by adversaries to create deterrence, anarchy and political schism in our society. In the history of hybrid warfare, one of the most devastating cyberattacks included the use of a malicious computer worm, Stuxnet. The covert mission code-named “Olympic games” was conducted by the United States and Israel against Iranian nuclear program using Stuxnet. The classified effort started under the regime of George W Bush in 2006 when General James Cartwright who was then head of U.S Strategic Command introduced the idea. Overall, the cyberattack which was finally executed under the Obama administration was responsible for destroying 1,000 of Iran’s 6,000 centrifuges at the uranium enrichment plant in Natanz. In the area of perception and opinion building, technology also plays a major role. During the U.S elections in 2016, far-right content was promoted and pushed through social media outlets for the support of Republicans. Andrew Bosworth, a Facebook executive and a close friend of the firm’s chief executive Mark Zuckerberg, claimed the company was responsible for Donald Trump’s victory during U.S elections. According to an indictment issued by special counsel Robert Mueller, a Russian organisation called the Internet Research Agency bought ads on social media to help the former president during his campaign. The Russian organisation was responsible for promoting Donald Trump and disparaging Hillary Clinton. It is pertinent to mention here that Donald Trump’s campaign has also been accused of discouraging 3.5 million black Americans from voting by showing them negative ads about Hilary Clinton on Facebook. The gravity of situation and power of technology can be realised by studying the report issued by Pew Research Center which suggests, black voter turnout rate declined for the first time in 20 years during U.S presidential elections in 2016. Unfortunately, Pakistan has also been subjected to 5th generation warfare due to nefarious motives of the adversaries. The report “Indian Chronicles”, published by the Brussels-based organisation EU DisinfoLab, which meticulously exposed a network of 500 fake media outlets that India had been using for 15 years to portray a negative image of Pakistan in the European Union and the United Nations should be eye-opening for the nation. Amidst all the recent – political turmoil, this nation has been through, hostile intelligence agencies are exploiting the situation by trying to turn the nation against its military. A set of fake audio recordings of former senior military officials were leaked on social media to malign the prestigious institution. Afterwards, all those former senior military officials clarified that the recordings were fake and voices in those recordings did not belong to them. There are a few steps that can be taken by policy makers to thwart the spread of propaganda in Pakistan during these trying times. In this era of “Information Warfare”, we do not have offices of social media giants in our country, which has become a huge hurdle in blocking of anti-state content. Opening offices of social media companies would eliminate the hindrance that is present in censorship matters as it would offer a direct contact of our government officials with the representatives of social media companies. An effort to ensure censorship by opening offices of social media platforms in Pakistan was made by government officials through ‘Citizen Protection Against Online Harm Rules 2020’. In response, the tech companies combined and threatened to make their services unavailable to 70 million Pakistani internet users as they believed it was an attempt against freedom of speech to censor content. Policy makers should now have negotiations with individual social media company instead of trying to handle all of them in a single attempt. Another step, albeit a technical one, can be introduction of alternate social media applications that can be censored by the government to counter weaponized narratives of enemy. One great example is China, where people use applications such as WeChat as an alternative to Facebook, whilst Baidu is commonly used instead of Google, yet the country is making huge progress economically, technologically and militarily. Lastly, the intelligentsia should raise awareness of hybrid warfare to halt the spread of misinformation as it is the need of the hour. People should be guided about the detrimental results of sharing content without verifying it beforehand. The writer can be reached at: mhanz25@gmail.com. Theory in the history of war This article needs additional citations for verification. Please help improve this article by adding reliable sources. Unreliable material may be challenged and removed.Find sources: “Generation warfare” – news – newspapers – books – scholar – JSTOR (October 2020) (Learn how and when to remove this template message) Part of a series onWar History Prehistoric Ancient Post-classical Early modern Late modern industrial fourth-gen Battlespace Aerospace Air Airborne Space Land Cold-region Desert Jungle Mountain Urban Sea Amphibious Blue Brown Green Surface Underwater Subterranean Tunnel Cyber Information Weapons Armor Artillery Barrage Biological Camouflage Cavalry Chemical Class Combined arms Conventional Cyber Denial Disinformation Drone Electronic Infantry Lawfare Loitering Music Nuclear Psychological Deepological Unconventional TacticsList of military tactics Aerial Battle Cavalry Charge Counterattack Countersubmarine Defeat in detail Foxhole Envelopment Guerrilla Morale Rapid dominance Siege Swarming Tactical objective Target saturation Trench Withdrawal Operational Military operation Operations research Blitzkrieg Expeditionary Deep operation Maneuver Operational manoeuvre group StrategyList of military tactics List of military specialism Women in the military Children in the military Transgender people and military service Sexual harassment in the military Conscientious objector Counter-recruitment Logistics Military–industrial complex Arms industry Materiel Supply-chain management Main operating base Forward operating base Outpost Science Power projection Loss of Strength Gradient Law Court-martial Geneva Conventions Geneva Protocol Justice Perfidy Rules of engagement Martial law War crime Theory Air supremacy Command of the sea Unrestricted Warfare Related Anti-war movement Outline of war Just war theory Principles of war Philosophy of war War film Military science fiction War game Lancheater’s laws Security dilemma Tripwire force Mercenary War novel Women in war War resister War studies Wartime sexual violence Lists Battles Military occupations Military tactics Operations Sieges War crimes Wars Weapons Writers vs The concept of four “generations” in the history of modern warfare was created by a team of United States analysts, including William S. Lind,[1] for the purpose of an argument for “the changing face of war” entering into a “fourth generation”. The generations of warfare are sometimes dubbed as “4GW”.[2] First-generation warfare refers to Ancient and Post-classical battles fought with massed manpower, using phalanx, line and column tactics with uniformed soldiers governed by the state.[dubious – discuss] Second-generation warfare is the Early modern tactics used after the invention of the rifled musket and breech-loading weapons and continuing through the development of the machine gun and indirect fire. The term second generation warfare was created by the U.S. military in 1989. Third-generation warfare focuses on using Late modern technology-derived tactics of leveraging speed, stealth and surprise to bypass the enemy’s lines and collapse their forces from the rear. Essentially, this was the end of linear warfare on a tactical level, with units seeking not simply to meet each other face to face but to outmaneuver each other to gain the greatest advantage. Fourth-generation warfare as presented by Lind et al. is characterized by a “post-modern” return to decentralized forms of warfare, blurring of the lines between war and politics, combatants and civilians due to nation states’ loss of their near-monopoly on combat forces, returning to modes of conflict common in pre-modern times. Fifth-generation warfare is conducted primarily through non-kinetic military action, such as social engineering, misinformation, cyberattacks, along with emerging technologies such as artificial intelligence and fully autonomous systems. Fifth generation warfare has been described by Daniel Abbot as a war of “information and perception”.[3] First generation Prussian infantry advancing in line and column formation at the Battle of Hohenfriedberg in 1745 In 1648, at the end of the Thirty Years’ War, the Treaty of Westphalia gave a practical sovereignty to the German states, which until then were semi-independent components of the Holy Roman Empire. This more firmly established the sovereignty of the nation-state, which meant, among other things, that governments would have exclusive rights to organize and maintain their own militaries. Before this time, many armies and nations were controlled by religious orders and many wars were fought in *mélee* combat, or subversively through bribery and assassination. The first generation of modern warfare was intended to create a straightforward and orderly means of waging war.[4] Alternatively, it has been argued that the Peace of Westphalia did not solidify the power of the nation-state, but that the Thirty Years’ War itself ushered in an era of large-scale combat that was simply too costly for smaller mercenary groups to carry out on their own. According to this theory, smaller groups chose to leave mass combat—and the expenses associated with it—in the domain of the nation-state.[5] The increased accuracy and speed of the rifled musket and the breech-loader marks the end of first generation warfare; the concept of vast lines of soldiers meeting face to face became impractical due to the heavy casualties that could be sustained. Because these technologies were adopted gradually throughout the Americas and Europe, the exact end of the first generation of modern warfare depends on the region, but all world powers had moved on by the latter half of the 19th century.[4] In order to create a more controlled environment for warfare a military culture was developed that, in many ways, is still visible in the armed forces of today. Specially crafted uniforms set soldiers apart from the general populace. An elaborate structure of rank was developed to better organize men into units. Rules for military drill were perfected, allowing line and column maneuvers to be executed with more precision, and to increase the rate of fire in battle. Control of media information release during the war and production of counterfeit money in order to devalue enemy’s economy were used for the first time during Napoleonic wars. Examples: English Civil War Anglo-Spanish War Seven Years’ War American Revolutionary War Napoleonic Wars War of 1812 Mexican War of Independence Second generation Technological developments such as the Maxim gun gave smaller units the ability to operate more independently in the 19th century, the invention of the breech-loading rifled musket meant longer range, greater accuracy, and faster rate of fire. Marching ranks of men straight into a barrage of fire from such weapons would cause tremendous rates of casualties, so a new strategy was developed. Second generation warfare still maintained lines of battle but focused more on the use of technology to allow smaller units of men to maneuver separately. These smaller units allowed for faster advances, less concentrated casualties, and the ability to use cover and concealment to advantage.[4] To some degree, these concepts have remained in use even as the next generations have arisen, so the end of the second generation is not as clearly defined as that of the first. The development of the blitzkrieg highlighted some of the flaws of static firing positions and slow-moving infantry, so this can be considered the beginning of the end for the second generation, at least as the dominant force in military strategy. The contributions of the second generation were responses to technological development. The second generation saw the rise of trench warfare, artillery support, more advanced reconnaissance techniques, extensive use of camouflage uniforms, radio communications, and fireteam maneuvers. Examples: American Civil War Boer War World War I Spanish Civil War Iran–Iraq War Third generation Fast advances and maneuvering allowed Allied mechanized forces to quickly penetrate deep into Iraq during the Gulf War The use of blitzkrieg during the German invasion of France first demonstrated the power of speed and maneuverability over static artillery positions and trench defenses. Through the use of tanks, mechanized infantry, and close air support, the Germans were able to quickly break through linear defenses and capture the rear. The emphasis on maneuvering and speed to bypass enemy engagement remains a common strategy throughout the world, and collapsing an enemy’s defenses by striking at deeper targets is—in a somewhat different way—a major strategy in fourth generation warfare.[4] The contributions of the third generation were based on the concept of overcoming technological disadvantage through the use of clever strategy. As linear fighting came to an end, new ways of moving faster began to appear. The emphasis on mobility moved from heavy armor to greater speed, the development of the helicopter allowed insertions in hostile territory, and advanced missile technology allowed forces to bypass enemy defenses and strike at targets from great distances. The speed inherent in these methods necessitated a greater degree of independence allowed to the units on the front lines. Greater trust needed to be placed in junior officers commanding sub-units by higher-ranking officers—a belief that they could adequately achieve their objectives without micromanagement from higher ranking commanders in command headquarters. Smaller units were allowed greater decision flexibility to deal with changing situations on the ground, rather than have decisions made for them by commanders who were distant from the front. This began to break down the regimented culture of order that was so important in previous theoretical eras of military command and control. Examples: World War II Korean War Vietnam War Persian Gulf War Invasion of Afghanistan Iraq War Fourth generation Main article: Fourth-generation warfare Fourth-generation warfare is characterized by a blurring of the lines between war and politics, combatants and civilians. The term was first used in 1989 by a team of United States analysts, including William S. Lind, to describe warfare’s return to a decentralized form. In terms of generational modern warfare, the fourth generation signifies the nation states’ loss of their near-monopoly on combat forces, returning to modes of conflict common in pre-modern times. The simplest definition includes any war in which one of the major participants is not a state but rather a violent non-state actor. Classical examples, such as the slave uprising under Spartacus or the mercenary uprising that occurred in Carthage after the first Punic War, predate the modern concept of warfare and are examples of this type of conflict. Guerillas in Maguindanao, 1999 Fourth generation warfare is defined as conflicts which involve the following elements: Are complex and long term Terrorism (tactic) A non-national or transnational base – highly decentralized A direct attack on the enemy’s core ideals Highly sophisticated psychological warfare, especially through media manipulation and lawfare All available pressures are used – political, economic, social and military Occurs in low intensity conflict, involving actors from all networks Non-combatants are tactical dilemmas Lack of hierarchy Small in size, spread out network of communication and financial support Use of insurgency and guerrilla tactics Fourth-generation warfare theory has been criticized on the grounds that it is “nothing more than repackaging of the traditional clash between the non-state insurgent and the soldiers of a nation-state.”[6] Fifth generation Main article: Fifth-generation warfare Fifth-generation warfare (5GW) is warfare that is conducted primarily through non-kinetic military action, such as social engineering, misinformation, cyberattacks, along with emerging technologies such as artificial intelligence and fully autonomous systems. Fifth generation warfare has been described by Daniel Abbot as a war of “information and perception”.[7] Definition There is no widely agreed upon definition of fifth-generation warfare,[8] and it has been rejected by some scholars, including William S. Lind, who was one of the original theorists of fourth-generation warfare.[9] The term ‘fifth-generation warfare’ was first used in 2003 by Robert Steele. The following year, Lind criticised the concept, arguing that the fourth generation had yet to fully materialize.[10] In 2008, the term was used by Terry Terriff,[11] who presented the 2003 ricin letters as a potential example, but stated that he was not entirely sure if it was a fifth-generation attack, claiming “we may not recognize it as it resolves around us. Or we might look at several alternative futures and see each as fifth generation.”[11] Terriff argued that while fifth-generation warfare allows “super-empowered individuals” to make political statements through terrorism, they lack the political power to actually have their demands met.[12] L. C. Rees described the nature of fifth generation warfare as difficult to define in itself, alluding to the third law of science fiction author Arthur C. Clarke – “any sufficiently advanced technology is indistinguishable from magic.”[13] Characteristics Alex P. Schmid said that fifth-generation warfare is typified by its “omnipresent battlefield”, and the fact that people engaged in it do not necessarily use military force, instead employing a mixture of kinetic and non-kinetic force.[14] In the 1999 book Unrestricted Warfare by colonels Qiao Liang and Wang Xiangsui of the People’s Liberation Army, they noted that in the years since the 1991 Gulf War, conventional military violence had decreased, which correlated to an increase in “political, economic, and technological violence”, which they argued could be more devastating than a conventional war.[15] On the contrary, Thomas P. M. Barnett, believes that the effectiveness of fifth-generational warfare is exaggerated, as terrorism conducted by individuals, such as Timothy McVeigh or Ted Kaczynski, lacks the support of more organized movements. This was seconded by George Michael, who noted that in the United States, gang violence was responsible for far more deaths than lone wolf terrorist attacks.[16] References ^ Lind, William S.; Nightengale, Keith; Schmitt, John F.; Sutton, Joseph W.; Wilson, Gary I. (October 1989), “The Changing Face of War: Into the Fourth Generation”, Marine Corps Gazette, pp. 22–26 ^ Defense Technical Information Center (2007-06-01). DTIC ADA521639: Military Review, Volume 87, Number 3, May-June 2007. ^ Abbott, Daniel (2010). The Handbook of Fifth-Generation Warfare. Nimble Books. p. 20. ^ a b c d Lind, William S. (January 15, 2004), “Understanding Fourth Generation War”, antiwar.com, retrieved February 7, 2010 ^ Echevarria, Antulio J., II (November 2005). Fourth-Generation War and Other Myths (PDF). Strategic Studies Institute, United States Army War College. ^ On Fourth Generation Warfare, The Mackenzie Institute ^ Abbott, Daniel (2010). The Handbook of Fifth-Generation Warfare. 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