

Metamorphosis of Warfare War without Warriors or Battlefields*

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Abstract

While humans are imperfect, machines have their limitations, too. Though humans cannot match the speed and accuracy of machines, the ideology, pride and will to dominate and rule are qualities only attributed to humans. The latter's capability to change and evolve, opens new vistas of opportunities, innovations, integrations, and alignments, such as to deceive, distract, and defile the most invincible assailant. In this context, the fifth generation warfare marks a shift from conventional Clausewitzian understanding of war to the battle of 'information and perception'. As for the generational concept in warfare, it depicts the evolution of war tactics enabled by advances in science and the accompanying growth in the sophistication of warfare tools. Today warfare relies less on the use of brute force and focuses more on non-kinetic means such as narrative, perception management, and asymmetric conflict to achieve political ends. This paper looks at the evolution of warfare from first to fifth generation. It also explores the latest war trends in land and air warfare and analyzes the hybrid and 'Everywhere Battlefield', which though marks technical superiority, yet points to a decline in humanity and human values.

Keywords: Fourth Generation Warfare, Fifth Generation Warfare, Proxy Wars, Theater Command, Network Centric Warfare.

Introduction

Wars have been part of human record since the beginning of the ancient world. They have been the signposts that show the way through past – their bloody stink reminds how mankind has always associated heroism with the mass killings of parts of its species. Whether 'war' is a fundamental trait of human

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nature or a societal phenomenon that can be controlled has been the subject of debate in related fields.

Despite living in the Twenty First Century and being cultured with the accumulative knowledge of great human civilizations, wars are still a common form of man's expression of power and dominance. Nations only consider dialogue after they have shed enough blood. Thus, today's geopolitics revolves as much around wars as it may around geo-economics and other factors.

Anthropologist Lionel Tiger theorizes¹ that the nature of men, which has evolved in the 'assumed'² two million years of human history, is based on their 'game' instinct and that man is 'biologically or genetically wired for hunting – for the emotions, excitements, curiosities, the fears and the social relations that were needed in the hunting way of life'.

Considering this theory, would then mean disapproving of the constructivist³ view of war being a culturally learned practice that can be altered through positive social practices. But the truth about war is that it has been a constant phenomenon. According to an estimate, 'of the past 3,400 years', humans have been entirely at peace for only 268 of them, or just eight percent of recorded history,⁴ killing around one billion people in all this time.

Evolution of War

The evolution of war throughout history and rather recent concept of its evolution from the first generation to the fifth is, therefore, not an evolution of the very definition of war. Rather, it is only an evolution of war tactics enabled by advances in science and the accompanying growth in the sophistication of warfare tools. In its nature, war has always been 'war by all means' throughout history and will remain to be so.

This very nature of war makes it more and more deadly with every passing day because for every penny spent on science for the relief and comfort of humanity, several hundred more are spent on technologies meant for its destruction. And whereas states bearing sophisticated technologies of these sorts will become exponentially more powerful than those who are bereft of them, there are projections that with the slightest mismanagement of such high-end weaponry, the power to inflict mass damage will easily be dispersed among rogue elements, making terrorism a permanent menace within states and even at the global level.

In so much as the strategy of war has always been ‘war by all means,’ the goals to be achieved by it have always been gaining ‘control and power’. Control and power can be both physical and psychological. While most wars are fought to gain control over resources and economic flow, there is always a self-affirmation of goodness, virtue, and efficacy that symbolizes every victory as a victory of morality and the greater good.

This is important because without winning the psychological battlespace, there will always be a probability of the turning over of victory between the belligerents. For the defeated, whose sovereignty as a nation has been seized, the negation of its self-integrity will render it ionized and capricious for as long as its morality has not been satisfied.

However, besides being an essential second nature of mankind, war is also the most imminent existential threat to the species. Not only because by making more and more lethal weapons, especially nuclear ones, states are taking a step further to the catastrophic destruction of life and property, but also because states are increasingly spending huge budgets on the development and amassing of these weapons, budgets that should have been spent on the welfare of humanity.

So, there is a need not only to understand war and make parallels between the fourth and fifth generational tactics but also to understand war vis-à-vis the application of ethics and morality in war and the Just War Theory.⁵

Generational Warfare Tactics

The origins of the Fourth Generation Warfare (4GW) concept are found in William Lind’s essay. He introduced the concept of dividing ‘modern warfare’ into eras called ‘generations’ for the first time in his essay “The Changing Face of War: Into the Fourth Generation.”⁶ In starting his ‘generations’ with the modern era, Lind’s intention would not have been to negate all the history of war before this time. Still, the popularity of Lind’s concept somehow pushed the hundreds of wars fought with swords, spears, arrows, and siege engines to a kind of Zero Generation that had perhaps no relevance in the study of war anymore.

Lind started the First Generation with the Fifteenth Century smoothbore muskets, first developed by the Ottomans, the Chinese, and the

Japanese. This was combined with the line and column tactics that maximize that kind of firepower.

The Second Generation was defined by the use of 'rifled musket, breechloaders, barbed wire, the machinegun, and indirect fire'.⁷

The Third Generation, aided by increased firepower, was essentially an ideological shift in tactics from 'seeking to close with and destroy' the enemy to a different frame of mind of 'maneuver warfare'. The Germans introduced this tactic as 'blitzkrieg,' which meant infiltration into the enemy's rear by bypassing the actual battlefield and the enemy's combat forces and collapsing them by attacking and encircling their bases.

As for the 4GW, Lind speculated a battlespace with small groups of high-tech warriors that would replace brigades and battalions. The use of high-power small weapons, robotics, unmanned aerial vehicles (UAVs), and artificial intelligence would allow the warfare to be 'widely dispersed and largely undefined'.⁸ This new battlefield would take advantage of psychological operations, the control of media, and cyber warfare in ways that they would dominate as more effective weapons than conventional ones.

Lind predicted that this kind of 'dispersed' warfare would blur the distinction 'between war and peace' and 'between civilian and military,' and the targets would be the enemy's 'culture,' 'political infrastructure,' 'social fabric' and the 'population's support of its government and the war'.⁹

Lind also idealizes some 4GW characteristics in the behavior of 'terrorists,' like their ability to conduct broad mission orders at the individual level, living almost completely off the land, their light-weightedness and maneuverability, and their strategy to destroy the enemy from within. Moreover, the terrorist, camouflaged as a member of the society, can use the society's strengths for his own purpose.

The unprecedented popularity of Lind's essay and the construction of the future war machine, especially that of the United States (US), which was constructed on exactly the lines Lind had proposed, raise a question mark on the morality of the US' conception of war. Also questionable are Lind's complete evasion of the Geneva Conventions on war (1949) and the ethics drawn in the Just War Theory.¹⁰ His enthusiasm for the US being able to translate technology into a 'militarily effective fourth generation of weapons'¹¹

hardly makes his ideas inspiring. Rather, the culture from where such an idea had been generated should have been questioned from the onset.

The Geneva Conventions on war clearly state that the attackers ‘do everything feasible to verify that the objectives to be attacked are neither civilians nor civilian objects... but are military objectives’¹² and that ‘civilians shall enjoy protection against the dangers arising from military operations...’ ‘unless and for such time as they take a direct part in hostilities’.¹³ Yet, Lind talks of attacking the culture of the target state, targeting its civilians more than its military, and the political infrastructure and civilian society becoming battlefield targets.

The Conventions also state that ‘employing weapons... and methods of warfare... which are inherently indiscriminate, is in violation of the international law of armed conflict constitutes a war crime in international armed conflicts,’¹⁴ whereas Lind contrarily talks of target selection ‘which will be a political and cultural, not just a military decision’.

Interestingly, Lind in his essay, written in 1989, described rogue elements with terms like rebels, non-state actors (NSAs), and insurgents in proxy war reference. ‘Terrorism’, though rife in many parts of the world in the Cold War proxy warfare scenarios, was an intra-state issue. But within a decade of this writing, it became a global, inter-state problem, especially as manifested in the doings of Al-Qaeda and the Arab Spring wars. It may seem like the proxy warfare’s development into 4GW and the development of ‘terrorism’ into a phenomenon of its own and into a global force were evolving side by side since the end of the Soviet-Afghan War (1989) and perhaps the US and Britain have some part in promoting the usage of this term.

War on Terror (WoT)

There is a question that all the wars after September 11, 2001, were largely fought on the premise of war on terror (WoT) and the ‘terrorists’ that the US would essentially have to fight off to save American lives and the larger humanity were exactly like the ones idealized by Lind. They were ‘camouflaged as a member of the society,’ ‘using the society’s strengths for their own purpose’ and ‘destroying the enemy from within,’ and also ‘invisible’ and as big and strong as one would imagine it to be. The so-called ‘terrorist’ was also going to be giving a self-proclaimed legitimacy for the US and North Atlantic Treaty Organization (NATO) to breach the sovereign boundaries of other nations.

As hinted by former British Foreign Secretary Robin Cook, terrorism, or rather Islamic terrorism, originated under the sheltering of the Central Intelligence Agency (CIA). Cook wrote in *The Guardian*, ‘Bin Laden was... a product of a monumental miscalculation by western security agencies. Throughout the 80s, he was armed by the CIA and funded by the Saudis to wage jihad against the Soviets occupation of Afghanistan’.¹⁵

This miscalculation was also revealed, for instance, in the story of Ali Muhammad,¹⁶ who was training the Al-Qaeda operatives at the same time when he was a serving green beret in the US Army. Though the ‘miscalculation’ can be in the event of not knowing how Al-Qaeda would spiral off into other regions of the world after the Soviet-Afghan War (1979-1989), what the Al-Qaeda and Osama Bin Laden did inside Afghanistan was indeed planned and supervised by the US and agencies of its friendly states and was an advanced form of proxy warfare which produced such grey areas that could be used for 4GW missions inside Afghanistan and in Pakistan, in future.¹⁷

The US, being the leader in war technology, has a larger burden of ‘responsibility to protect’¹⁸ the larger humanity – and perhaps it is time to learn from such miscalculations and admit criminal negligence, whose effects have followed into the Middle East and North Africa. The future is predicted to be much more deadly with 4GW evolving into 5GW because the damage done by a simple psyop of labeling certain proxies as ‘Islamist terrorists’ has been unprecedented, as almost 1.9 billion Muslims still face hatred in the form of Islamophobia around the world. This shows that phenomena and concepts will play a major role in the coming generations of warfare.

Thomas Hammes, explaining the evolution into 5GW, says the ‘fourth-generation warfare (4GW) uses all available networks – political, economic, social and military – to convince the enemy’s political decision-makers that their strategic goals are either unachievable or too costly for the perceived benefit’. Going further, he warns that ‘Fifth-generation warfare will result from the continued shift of political and social loyalties to causes rather than nations. It will be marked by the increasing power of smaller and smaller entities and the explosion of biotechnology’.¹⁹

Hammes also points out the cultural change brought about by the internet: ‘People are changing allegiance from nations to causes... in fact, many people are much more engaged in their online causes than in their real-

world communities'. Therefore, they are easier to manipulate with the help of the social media.

Hybrid Warfare

This merger of the conventional, irregular, informational, cyber, and other means to defeat the enemy brings us to the hybrid concept. Conceptually, hybrid warfare is only a complex variation of irregular warfare. In reality, the mounting complexity it bears with emerging technologies and evolving methods used by the opponents for deception and engagement in a changing environment makes it something more than irregular warfare and something the word actually implies – a constant evolution of new forms with combinations and permutations of possibilities, as situations arise.

So, all wars have been hybrid, but the magnitude and complexity has increased in the 4GW and 5GW manifold. Understanding the 5GW will, therefore, require the differentiation between the levels of complexities in 4GW and 5GW, the realization of the new emerging possibilities, and the forms in which they are being employed.

Some characteristics carried forth from 4GW to 5GW are the proxy phenomenon that is labeled according to varying situations. In some places, it may be called terrorism; in others, militancy, good rebellion, freedom fighting, or insurgency. One major element is the element of surprise, just like the phenomenon of Islamic militancy that took all Muslim states by surprise, so much so that it took around a decade for many states to decode the phenomenon and counter it.

Other factors include the reducing of 'boots-on-ground,' the development of small units of 'super-soldiers' that penetrate the target society without detection, and the extensive use of psyops, using control of different media, targeting the perception of the people and damaging the will of the nation as a sovereign entity. With the underlying natural human instinct of 'war by all means,' 5GW will also employ the cream of human and natural resources in the development and deployment of the ever-sophisticated, state-of-the-art weaponry in the evolved battlespaces of the future.

Chen Kanghao Victor ²⁰ highlights globalization, radicalism, demographics, food and water, the proliferation of Weapons of Mass Destruction (WMDs), and the mix of conventional and insurgent forces as geostrategic factors that are driving the change in the strategic environment

leading to the hybrid warfare phenomenon. So, what is the '5GW' hybrid phenomenon?

Ray Alderman defines 5GW as a 'non-contact warfare'.²¹ He explains that the 5GW 'non-contact' began with the 'precision accuracy' obtained by the 'predator drone and its Hellfire missiles'. He says, '5GW began in 2002 and has been used to destroy infrastructure as well as specific human targets ever since'.

And just to give a taste of what future drones will be doing, Alderman explains that the MQ-9A Reaper²² drones being developed in the US will be 'networked, capable of partial autonomy, all-weather, and modular with capabilities supporting electronic warfare (EW), CAS (close air support), strike, and multi-INT (multiple intelligence) ISR (intelligence, surveillance, and reconnaissance) missions' platforms'. MQ-9A will accomplish the '3F missions, i.e., find, fix, and finish'.

Taking Alderman's idea of 5GW being a 'non-contact warfare,' it will be interesting to categorize the very complex, evolving battlespace in terms of the major categories of land, air, naval, cyber, and space warfare and the possible impacts of innovative technologies on warfare.

Trends in Land Warfare

Land warfare remains the most prevalent form of warfare in the present time, with active war zones starting from the post-Arab Spring Middle East to North Africa. Several African nations swarm with militancy and terrorism, allowing outside powers to play proxies in them. Proxies are useful because they allow avoidance of 'attribution or retribution'.²³

But they have some limitations, too, owing to their being local entities, usually constructed of members of the deprived classes of society, who typically lack formal education and are mobilized on indoctrination. They only have informal training in small arms and the usual guerrilla tactics. Therefore, they can do only so much as launch crude attacks to terrorize sections of communities.

However, when it comes to taking on high-value targets or conducting crucial missions involving high-tech weapons and systems, there is a need for specialized super-combatants, aided with ultra-vision night gears, high-sensor communicators, connected to a high-bandwidth network, in agile bodysuits,

having lethal precision weapons, and working in concert with UAVs – like the US Special Forces or mercenaries such as the former Blackwater.

Ironically, while the US and its allies increasingly emphasize decreasing ‘boots-on-ground,’ they have increased the number of commandos, contractors, and mercenaries in all battlegrounds. The reason is that these forces can act undetected and with impunity so that while they are conducting the deadliest tasks, the democratically elected leaders of these governments can pose to have no blood on their hands and not face public resentment for their war crimes.

In 2019, *The Intercept* reported, ‘Today, American warfare is increasingly typified by a reliance on Special Operations Forces, private contractors, local proxies working with and for the military and CIA, and air power. These low-visibility forces make greater secrecy and less accountability’.²⁴ These special forces ‘are deployed in 75 countries... in the Philippines and Colombia, teams are operating in Yemen and elsewhere in the Middle East, Africa and Central Asia’.²⁵ The same has recently been verified in the ongoing Gaza-Israel War²⁶ and the Ukraine War.²⁷

An Environment of Unpredictable Strikes

This means that while stealth and firepower will continue to be enhanced in billion-dollar fighter aircraft, nuclear naval vessels, and lethal technologies, for perhaps a final decisive confrontation, the real-time environment will be kept as a never-ending sequence of unpredictable strikes, draining the target state from within.

George Friedman, while explaining 4GW, says, ‘guerrillas, terrorists, and rioters are designed to deny their enemy a center of gravity at which to strike. Fourth Generation warriors apply force to an enemy without giving him a point at which to carry out a decisive counterstrike. The Fourth-Generation force has two goals. The first is simply to survive. The second is to impose such a level of violence on the enemy as to create a psychological sense of insecurity, impotence, and hopelessness’.²⁸

Friedman’s hint of ‘rioters’ being a part of the proxy setting explains the exponential rise in riots and protests in so many countries around the world. From Venezuela to Ukraine and the Arab Spring states to Hong Kong, organized networks can be seen comprising nongovernmental organization (NGOs), social media troll farms, and international organizations like the

National Endowment for Democracy (NED),²⁹ working in concert for regime change or major policy shifts in the target state.

Private mercenaries cover much of the ground battlespace with much less visibility. According to Peter Singer, ‘every major US military operation in the post-Cold War era (whether in the Persian Gulf, Somalia, Haiti, Zaire, Bosnia, or Kosovo) has involved significant and growing levels of private military firms (PMFs) support’.³⁰ In the Afghanistan War, Blackwater and Northrop Grumman received USD 569 million and USD 325 million³¹ contracts awarded by the Pentagon, and California Analysis Center (CACI) got USD 248 million. CACI was the same private firm that supplied private interrogators at the US military prison in Abu Ghraib.³²

The US is not the only player in this game. According to a report, Britain is the ‘mercenary kingpin’ of the global private military industry,³³ and ‘G4S is now the world’s largest private security company. No fewer than 14 companies are based in Hereford... from whose ranks at least 46 companies hire recruits’. G4S had security contracts in Afghanistan and Iraq, too.³⁴ Another familiar name is the Wagner Group, which works for Russia. Reports are that apart from Syria and Ukraine, the Wagner Group has also been active in Central African Republic (CAR)³⁵ and Mozambique.³⁶ They are reportedly strengthening Khalifa Haftar in Libya³⁷ since 2020.

This trend shows a mindset of decreasing inclination towards a conventional warfare setup. Even in Afghanistan and Iraq, where the US and NATO allies had occupied the countries, there was more reliance on an initial trust of air power to defeat the enemy’s political and defense mechanism and then delegating more of the dirty work to proxy militias, contractors, and remote drone controllers. Add to them ‘rioters’ and control on mainstream and social media platforms to create a globalized environment of constant ‘no-contact’ threats and attacks that states find themselves in.

The ethics of this type of warfare is obvious. The nation-state that was traditionally sovereign in all its matters is being rendered increasingly irrelevant. The only way for it to assert its relevance and maintain its sovereignty, even at the threshold level, is to reciprocate by infringing upon the sovereignty of its adversaries, creating proxies in their lands.

Ethics are also strangled by the creation of a situation where policymakers and the political setup depend more upon mercenary forces who ‘kill for reward’ rather than ‘fight for a purpose’ and where the aircraft pilot

and the drone controller are totally disconnected from those they are inflicting the horrors of war upon – thus dehumanizing the entire battlespace.

The land space is also proliferating with global crime syndicates that may be outflanking nuances like proxies and terrorism. Moisés Naim identified how vast global smuggling networks have occupied grey spaces between states, ‘The networks that form this parallel ‘black’ global supply chain, have a ‘GDP’ of \$1-3 trillion (some estimates are as high as 10 percent of the world’s economy) and are growing seven times faster than legal trade’.³⁸

In addition to that, cyber warfare makes the increasingly digitalized systems susceptible to cyber intrusions that can ‘steal, delete or change data, or insert false data that can quickly spread across the network’.³⁹

Also, add chemical and biological warfare to the list, which has long been documented as looming threats upon humanity. The long spell of COVID-19 that had 775,132,086 confirmed cases and 7,042,222 deaths till March 24, 2024,⁴⁰ spreading in all continents of the world, has only warranted apprehensions of what a real, concerted biological attack would do to humanity and civilization.

Adding all these factors up gives a scary feeling of where humanity is headed and its accumulative helplessness as to how impotent it is in jotting down a peace plan for humanity from all the heaps of data and tons of technologies gathered daily. In fact, with so many ‘known unknowns’⁴¹ at work, humanity is poised to encounter more and more ‘black swan’⁴² events due to the increased probability of malicious acts not only in grey spaces between states but also in circumstances when it becomes imperative for one state to defeat another by any means possible.

Trends in Air Warfare

Moving on from land to air warfare, it is undeniable how air warfare has superiority over land warfare, and this is illustrated by the fact that it took less than 13 days for the NATO alliance to take complete control of Benghazi with Operation Odyssey Dawn. In all, 110 Tomahawk missiles were launched,⁴³ of which 100 were launched on the first day. Within the first days, ‘batteries of Libyan surface-to-air missiles were destroyed. The military communication network, crucial to Gaddafi’s ability to maintain the momentum of his offensive, was severely disrupted’.⁴⁴ Operation Mermaid Dawn to take over Tripoli lasted for nine days.⁴⁵

As the allies vanquished Gaddafi's military prowess accumulated during his 42 years in power, in days or perhaps in hours from the air, rebel groups, deemed as the true democratic voice of the Libyan people, were allowed to take over city after city on the ground.

The overwhelming success of air warfare, as in the case of Libya, makes a good precedence for focusing on air power in the future battlespace. The Royal Australian Air Force Officer Peter Layton paints a rather extraordinary picture of how the 5GW air warfare⁴⁶ may look if the level of networking is achieved as he expects. It would be a network-centric one, he says, with different network grids collecting and distributing information, a combat cloud created by advanced information technology that helps create a 'big picture' of real-time information, multi-domains that break the battlespace up into land, sea, air domains, and fusion warfare that uses analytics to fuse data from numerous disparate sensors into a single common picture for decision-makers at theater level.

In such a war scenario, the technically superior power will tend to exercise invincible power with such stealth and accuracy that the target state would simply have no means to evade because the highly networked will have the support of the lethality of emerging weaponry of high speed and precision, like hypersonic missiles, flying missile rails, tactical airborne laser weapon systems, drone swarm technology, and F-35As and Bs.

Russia and China are also not far behind in the race for precision weapons. Russia has already deployed its new generation Su-57 fighters, its hypersonic glider, the Avangard, and is developing the PAK-DA strategic bomber program, as well as the latest versions of the MiG-31 interceptor. Russia has also developed the nuclear-capable and nuclear-powered Burevestnik cruise missile and the Kinzhal hypersonic air-launched ballistic missile.⁴⁷

China's air force and navy aviation are the largest aviation forces in the region and the third largest in the world, with over 2,000 combat aircraft.⁴⁸ Competing with the US stealth technology, the People's Liberation Army Air Force (PLAAF) has developed the J-20 Mighty Dragon stealth fighter and Xian H-6N ballistic missile bomber and is deploying increasingly sophisticated unmanned aerial vehicles and unmanned combat aerial vehicles.⁴⁹ Parallel to the US F-35 fifth generation stealth fighter jets, China has already launched the prototypes of its J-31, 5G stealth fighters.⁵⁰

Trends in Naval Warfare

In the naval arena, the People's Liberation Army Navy (PLAN) has a battle force of 350 vessels, compared to the US Navy's battle force of 293 ships, but the US' are generally much bigger and more capable, and the US Navy has twice the tonnage of the Chinese Navy'.⁵¹ And though the US naval presence is stronger globally; in its own seas, the 'PLA's anti-access/area-denial (A2/AD) capabilities are currently the most robust within the First Island Chain'.⁵²

Nevertheless, because most global trade happens via the oceans and most coastlines are dotted with naval bases laced with lethal weaponry, naval warfare remains a battlespace of increasing competitiveness. Furthermore, the increasing exploitation of marine resources and reliance on the oceans to sustain and support populations are leading to ecological stress and political friction. The oceans, which are seen as the next frontier for minerals, food, and energy extraction, have also seen an increase in assertive moves in the seas recently.

Contentions in the South China Sea (SCS) and the US shift in focus to the Indo-Pacific region have created the ground for the current rivalry between China and the US. Russia has hurried up to assert its ownership of oceans in the Arctic region, which holds large reserves of energy and can become the shortest route to Europe and North America in times to come. The maritime situation can also potentially turn into military flashpoints because of their intense traffic. The Malacca and the Red Sea choke points are seen as potential points of engagement between the US and China, the Arabs and Israel; and the Persian Gulf, which remains volatile owing to the ongoing wars in the Arab countries.

The Move into Space

Space dominance is another frontier that has a direct influence on 5GW. As big powers increase their presence in space by enhancing the indigenous development of advanced satellites and militarized surveillance space systems, smaller powers have to depend upon offensive space capabilities, like small co-orbital satellites, satellite jammers, and spoofing technologies, for minimal deterrence. Space, therefore, has been converted into a new field for competition and rivalry among nations. The weaponization of space has added 'a new layer of complexity to the existing dynamics of deterrence and

warfighting among states, which may lead to a greater level of brinkmanship and entanglement with nuclear assets'.⁵³

Recently, Russia vetoed a Security Council resolution introduced by Japan and the US that called on 'all states, in particular those with major space capabilities, to contribute actively to the objective of the peaceful use of outer space and of the prevention of an arms race in outer space'.⁵⁴ Instead, China and Russia asked for an amendment in this resolution that said to 'prevent for all time the placement of weapons in outer space and the threat or use of force in outer space, from space against Earth and from Earth against objects in outer space' there need to be negotiations that elaborate 'appropriate reliably verifiable legally binding multilateral agreements'.⁵⁵ Meaning that China and Russia are not ready to sign an unless and until a method is drawn wherein all sides are required to give 'verifiable' information regarding their arsenal in space and their capabilities for striking into space.

In this complex environment, space assets are indeed a major element in network-centric warfare, wherein the desired information superiority, speed, and precision all depend upon the swift collection and dispersal of information via satellites. If one side has the capabilities to strike on the other side's satellites, it will literally make that side deaf and blind in the battlespace. Once the information has landed in the cyber fields, adversaries will try to jeopardize datalinks and corrupt data in the systems as well as in the virtual combat clouds. Thus, they take warfare to the point where the multi-domain of land, sea, air, space, and cyber become simultaneously integral to the pursuit of power and dominance.

This 'oneness' of the battlefield is similar to Carl von Clausewitz's term *Kriegstheater* (Latin: *theatrum belli*), which describes the battlespace as 'not a mere piece of the whole, but a small whole complete in itself'.⁵⁶

This notion has been extended into a 'theater command' idea, wherein the entire land, sea, and air area that may become or is directly involved in war operations becomes one unified theater. And this idea is being put into practical use with the increasing capabilities of militaries to become network savvy. So, the US, Russia, and China all have been conceptually building ideas for their command theater.

The US has conceptually moved from the command and control (C2)⁵⁷ to the command, control, communications, computers, intelligence (C4I)⁵⁸ idea. Unlike the US' global command structure, Russia and China

have devised military theater commands (MTCs) restricted to their national boundaries, more focused on ‘unresolved regional conflicts’⁵⁹ rather than going into too far-off conflicts around the world.

But building all this is easier said than done because of another potentially unpredictable, uncontrollable, and innumerable element – the human element. And this brings to another useful idea of ‘fusion warfare,’ which refers to ‘being able to use improved analytics that fuses data from numerous disparate sensors into a single common picture for decision-makers at the tactical and operational levels of war’.⁶⁰ Information from multiple observe, orient, decide, act (OODA) loops needs to be collected, analyzed, and executed in compressed real-time.

This complex fusion needs both machine-to-machine learning and machine-to-human teaming. Lani Kass and Phillip London warn that even with fusion warfare and despite having enormous amounts of data and sophisticated technology, it is human decision-making derived from the integration of information into a ‘holistic’ thinking inside the human mind, where the ultimate decisions are to be made, that matters in the end.⁶¹

So, when it is time for decision-making, ‘an exhaustive search for and thorough evaluation of information is often deemed impractical. Heuristic methods are used to speed up the analytical process through linear pattern formation, intuitive judgments, and ‘educated guesses’.⁶²

Technical Superiority Cannot Guarantee Success

So, what are the repercussions of this type of warfare trend on the larger humanity, and how do developing nations who lack the wherewithal needed to develop technological and production superiority understand and strategize their role in the coming wars? Is the future completely bleak, where weak nations will be at the mercy of high-tech firepower and super-computers that will control everything, including how one thinks, or will they resist, fight back, and take back their sovereign spaces?

Indeed, so far, technical superiority has not proven to be the guarantee for success in battle, as seen in the wars in Afghanistan, Iraq, Syria, Yemen, and Libya – and is being seen more so in the present-day wars in Ukraine and Gaza. In all these previous wars, the US and its NATO allies had the benefit of absolute firepower upon their opponents. Fragmentation bombs BLU-82⁶³ (Daisy Cutter), each weighing 6,800 kg and producing overpressure of 1,000

pounds per square inch, close to that of a tactical nuclear weapon, were used to scorch the soil of Afghanistan. It took only days for the allies to bomb their cities and destroy their military inventory. On the ground, they used proxies that fought for them while they remained secure in green zones and armored vehicles.

But as the years passed, the US found itself entrapped in frustrating and unyielding circumstances. The ragtag Taliban were able to restrict US/NATO activities to safe houses in Kabul, actively engaging against them in battle in almost every city and every district. Apart from how they may have trained or weaponized themselves, what the Taliban had and the occupying forces lacked was the 'purpose to fight' and 'no option to run away' and a larger-than-life vision of the battle for which the former were prepared to give their lives.

So, the Taliban stayed, improvised, learned with experience the methods and moods of their enemy, and were able to counter them with 'surprise, denial and deception'⁶⁴ – essentially psychological phenomena because they are derived from the experience of a situation and the human instincts that come to work to counter that situation.

The same was repeated earlier in Iraq in March 2003, with intense aerial bombardment on Baghdad, followed by a tight blockade and fierce urban combat in the city to destroy all Baathist capabilities. Basra, Nasiriya, and Najaf were conquered one by one, as the marines were instructed to 'shoot everything that moves and everything that doesn't move'.⁶⁵

Only five months after the coalition's invasion, in August 2003, an Al-Qaeda-affiliated⁶⁶ group appeared in Baghdad, creating the reason for a protracted battle. All this, and when the US announced its withdrawal in 2014, sectarian insurgency was in full swing, and the Islamic State of Iraq and the Levant (ISIL) had firmly established itself in Iraq.⁶⁷

Moreover, the post-invasion Iraqi government formed in Baghdad was largely Shia-dominated, followed by huge Iranian influence on Baghdad and the Iranian Quds Force entering Iraq to fight against the ISIL.

Was the Iraq War meant to shift power to pro-Iranian forces when Iran is the most pronounced enemy of the US and Israel, or was the war strategy completely flawed and failed? Did the war prove, once again, that increasing the intensity and precision of strike power, detailed information of

the target country via satellite, cyber and physical means, and even an alliance with the world's strongest militaries do not guarantee victory or even predict how the war will unfold, and how the human factor will be able to create new deceptions, surprises, and denials against forces that were themselves masters of deception, denial, and surprise?

Kass and Phillip are right in saying that 'strategy is hard to do, because it is both an art and a structured intellectual process. It is the constant adaptation of ends and means to rapidly changing conditions in an environment where chance, uncertainty, fog, friction, and ambiguity dominate. To make it even more complex, strategy is a multi-sided affair: the objectives, intentions, actions, and reactions of other participants – both allies and opponents – are often opaque and varied'... and 'in today's globalized world, driven by a 24/7/365 news cycle, these realities require a broader, more integrated, less linear approach,' and that strategic success depends on the four mutually supporting pillars of 'grasp of strategic theory and historic practice; innovation; integration; and alignment'.⁶⁸

Conclusion

In the coming networked-centered, high-precision future wars, aided with agile, gadgeted, and highly improvised sets of combatants, will the enemy, as weak and destroyed as it is, still be able to, within its meager resources and bare survival, come up with its own new innovations, integration, and alignments?

Perhaps one should reckon that though humans are imperfect, machines are imperfect, too. While accuracy and speed belong to machines, ideology, pride, and the will to dominate belong to humans. While machines can be extremely reliable at the tasks they are programmed for, they can only do those specific tasks, the human agent has the capability to change and evolve, and with his/her change in mood, the whole canvas of perception can enter a new matrix of reality. Once encountered with the most difficult and stressful situations, is when the human agent is likely to find and create new innovations, integrations, and alignments, such as to deceive, distract, and defile the most invincible assailant.

Military strategists around the world, especially in developing states, cannot assume that fourth and fifth generation warfare are a thing of the future rather they are already being applied in present battlefields; only it needs to be realized that the battlefields have broadened into all aspects of human lives

and households. With changes in the weapons employed, the techniques used, and the shift in the paradigms of war, the fear is that militaries may confuse friends with foes and whom to protect from whom.

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