

THE WARS OF FUTURE AND THE FUTURE WARS

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Abstract

In the last quarter of the 20th century, world armies were using more or less the same weapons and ammunitions. During the 20th century, armies tried to develop their range, fatality, speed and info collection potentials. The 21st century starts with the three primary developments in the defense area; evolution and characteristics of destruction, emerging of extraordinary platforms, and creation of great systems in the military technology. However, it is known that we are in the process of vital technological changes at the beginning of 21st century. It seems to be that there will be more fatal armies and ammunition, info collection systems for target acquisition, faster and longer range combat vehicles. As the revolution in the military affairs has not happened yet, we will see them only in a real and comprehensive war. Those real war scenarios are generally in and around the Eurasia, chosen by U.S. as “pivot area” for future.

Overview of Strategy Development

In ancient times, the only war strategy, named “mass attack strategy”, was made at the battlefield by warriors carrying spears and shields with cavalry in a mass army. Generally, goal of the wars at this period was to capture the capital, principal spice warehouses and/or a city which holds strong geographic positions. Losing the center of government in a country meant losing war. After the middle age wars, conquering important cities continued to gain importance. The wars were launched in the form of a violent attack of armored cavalries against infantry. Tactics were based on destroying enemy’s resistance with cavalryman. At that time, factor of strategy was affected by factor of time with improvements in railway and sea transportation using steam power. Mobilization and concentration of forces gained speed.

Strategies were developed on the basis of transportation lines.¹ In the First World War, commanders strategically had to dominate three basic factors;² mass human groups, technological developments and vast areas. Since armies got bigger when compared to the past, movement and deployments of the mass armies were very difficult, so new vehicles were developed. Air reconnaissance, new transportation vehicles and communication instruments (telephone, radio, telegraph, automobile and planes) contributed to combined command and control over largely dispersed forces and quick implementation of the orders.

1 Servet Cömert, Jeopolitik, Jeostrateji ve Strateji (Geopolitics, Geostrategy and Strategy), (İstanbul: Harp Akademileri Basım Evi 2000), 114.

2 Süreyya Yüksel, Strateji Kavramı ve Milli Stratejinin Tayini (Strategy Term and Setting National Security), (İstanbul: HAK Yayınları, 1976), 5.

Searches for the strategy shaped by the industrial and technological developments obtained a new agenda article with inclusion of the sea wars which were not an important issue for military theoreticians until that time. According to Alfred Thayer Mahan, dominance over sea meant superiority in the world and combat fleets should be organized with the most powerful ships in order to rule seas.³ On the other hand, after the first production of the plane as the basic element of air force in 1903, ten-thousand aircrafts were produced for the military purposes in the First World War. However, the bombardment effects of the air forces were not realized until the Second World War with the German influence all over Europe. In the Second World War, Germans also organized armored forces in terms of speed, mobility and striking power which are the elements of decisive battles.⁴ With the 2nd World War, characteristics of the war became greater and left larger and deeper effects over the life of human beings. Namely, the strategy became an art that not only belonged to the soldiers, but also to the statesmen. Fundamentally, war strategies were developed during the 2nd World War.

Following that war, new strategies for deterrence started to be organized in accordance with a more comprehensive point of view for security. The 'air force became a new element of the strategy with the 2nd World War. Subsequently, the land, sea and air power were the fundamental elements of the military power during the Cold War. The 'media' with its increasing effect during the 1990s have been a component of the strategy studies. The fifth dimension of the world has been the cyberspace with the utilization of electro-magnetic spectrum in security. In the 21st century, 'space' is added as a new basic element of the military power.⁵ In addition to efforts of establishing a space force, U.S.A. has established a cyber-space command in order to attack beyond the security purposes for the first time. We may presently mention about the six strategic thinking schools in the first decade of 21st century.⁶ First three of them are traditional; continental (also called as 'land power school' based on Carl Von Clausewitz's doctrine), maritime ('sea superiority school' named by Mahan) and aviation ('air power school' founded by Italian theoretician Giulio Douhet). The other three schools are defined as spatial ('space strategy school'), special operations ('secret war school'), combined (integrated military power school). The traditional continental strategy was based on the mass armies, decisive combats in the vast battle fields, preferably attack operations necessitating maneuver and fire power. Through the 20th century, thoughts of the continental school gained global dimensions. Soldiers of the 21st century require better foundations to set the ties between the military strategy and global geography.

3 Christopher Leigh Connery: Ideologies of Land and Sea: Alfred Thayer Mahan, Carl Schmitt, and the Shaping of Global Myth Elements, *Boundary 2* - Volume 28, No. 2, (Summer 2001), 173-201.

4 M.Tanju Akad, 20^{nci} Yüzyıl Savaşları. Stratejik, Taktik, Teknolojik ve Jeopolitik Yönleriyle (The Wars of 20th Century With The Strategic, Tactic, Technological and Geopolitics Aspects), (İstanbul: Kastaş Yayınları, 1992), 259-260.

5 G.K. Cunningham, *Landpower in Traditional Theory and Contemporay Application*, Edt. J. Boonne Bartholomees. *Guide to National Security Policy and Strategy*, (Washington D.C.: U.S. Army War College, 2006), 21.

6 John M. Collins, *Military Strategy: Principles, Practices and Historical Perspectives*, (Washington D.C.: Brassey's Inc., 2002), 61-62.

The Art of War and Technology

At the beginning of the 20th century, it is a fact that intense use of steam power subsequently oil products in navy and land vehicles, internal combustion engines and developing diesel technology radically increased mobility of not only civilian vehicles but also war instruments. After the 2nd World War, diesel-electrical engines escalated the staying duration under the sea and speed of submarine platforms running with nuclear technology. Air power gained great importance with developments in aerodynamics, emergence of air platforms (aircraft, satellite etc.), and technological improvements on gas turbines and jet engines toward the midst of the century. The war platforms extended their range and got lighter and could carry more arms by replacement of steel, aluminum alloys with the new substances like composite, titanium, plastics etc.⁷ Nuclear, biological, chemical and radiological weapons developed their destruction strength, launchers and ranges. The emergence of revolutionary innovations was seen which were in reconnaissance and perception equipments with the use of electronic-magnetic waves not only for communication but in technologies like radar, sonar, laser, GPS, INS.⁸ Guided arms (missiles) and war heads appeared. With the technological growth in perception and hitting from distance, use of precision-guided ammunition for the spot targets in form of reducing civilian casualty increased.⁹ In the 20th century, the most significant technological revolution was realized in information technology area.

In the last quarter of the 20th century, the world armies used to utilize more or less the same weapons and ammunition. The 21st century has started with the three primary developments in the defense area;¹⁰ evolution of destruction or destroy characteristics, emergence of extraordinary platforms, and creation of great systems in the military technology. Now the simple high explosives are obvious, and we are presently at the time of missiles with the multi-heads adjustable for the selected targets (tank, bridge etc.). On the other hand, the modern platforms used in the surface and deep in the sea, air and space displace the systems from land to land. It is the third evolution that the complicated military systems come out. Sensors, command control centers and weapon systems are integrated within a network system. With the development in technology, weapon types have increased in parallel to decrease in response time, and the theater conditions have changed exceeding the human capacity. Armed forces have adapted to multidimensional and synchronized operations by the means such as the Cruises, theater missiles, attack hellos, aircrafts, rockets, and unmanned air vehicles.¹¹ Technological developments show that the future systems will be based on the 3D radars and the precision-guided ammunitions for the spot and air defense needs.

7 Kemal Girgin, Işık Biren: 21. Yüzyıl Perspektifinde Dünya Siyaseti (The World Politics in Perspectives of 21 st Century, (İstanbul: Okumuş Adam Yayınları, 2002), 49-59.

8 INS: Inertial Navigation System.

9 Cihangir Dumanlı, Ulusal Güvenlik Sorunlarımız (National Security Questions), (İstanbul: Bizim Kitaplar, 2007), 24.

10 John Baylis, James Wirtz, Eliot Cohen, Colin S. Gray, Strategy in the Contemporary World, (Oxford: Oxford University Press, 2002), 245.

11 Gordon R. Sullivan, Anthony M. Corrales, The Army in the Information Age, Strategic Studies Institute, (Carlisle Barracks PA: US Army War College, 1995), 12.

The future combat environment in strategic, operative and tactical level is to stage as a kind of missile and counter-missile war sophisticated by dominant qualities. Stealth technology will increase the depth of battle area by utilizing helicopters and combat ships in addition to aircrafts. In the 21st century, it is evaluated that the four primary technologies are to gain more vitality in the defense area. They are the informatics, biotechnology, alternative energy and space technology. Expectations from the new technologies are basically; increase in strike precision, decrease in casualty, and less harm for innocents. It is a fact that the innovations like transistors, microelectronic, computer, film-optic cables, super conductors have contributed into satellite communication and image intelligence. The usage of space expands the capabilities of particularly situation awareness, communication, navigation, meteorology, guidance systems, missile defense. Space dominance is being crucial beyond the air superiority. Other technologies promising great innovations in the military are foreseen as the nanotechnology, robotics and artificial intelligence. The most dangerous expectation within them is to invent little, autonomous and intelligent machines for aggression. It is considered to fabricate super intelligent mines in order to halt the movement of hostile conventional troops.

The Wars of Future

The age we are in is a transition period; preference of quality rather than quantity, digitalization of wars, increasing role of commercial technologies for defense. We are in the era of troops with technological dominance, donated with appropriate weapons and equipment, integrated systems and good education. People who have a desire to develop an attack strategy in the battlefield will design their micro-chips in accordance with the new generation maneuver elements and platforms in order to use in case of a contact with the enemy. Future victories will be won by commanders who integrate precise fires with rapid maneuvers. It is foreseen that the warfare elements in the 21st century are in transformation as listed in Table 1. As a result of the technological developments in western countries, primarily U.S. Army has lately accepted a new military force concept based on the full dimensional attack. Instead of a heavy and bulky combat power, a new approach forms the basis of the future strategy with the utilization of versatile, more effective, and more agile power. A new war concept using small and mobile forces in the battle field emerges as integrating weapon platforms which are effective from distance, with more fatal fires with precision ammunition, and with info systems and air support in order to overcome against an enemy, huge in numbers and well donated.¹² The assumption here is that technology determines the winners of wars.

¹² Defense News, The Art of War. Precise Thinking, (June 17-23, 2002), 28.

Table 1: Warfare Elements in the 21st Century

Elements	The New Characteristics
Fire	Non-lethal, Directed Energy, Redirected Energy
Maneuver	Sea Basing, Vertical Battlefield, Lift for Operational Maneuver
Protection	Urban Operations, Battlefield Medicine
C2&C	Joint Interdependency & Interoperability
ISR	Demand-Centered Intel, Tactically Responsive Space
Logistics	Joint Demand-Centered Logistics

Source: Arthur Cebrowski: “Transformation Trends”, Office of Force Transformation, Arlington VA, (Feb 26, 2004), p.7.

Essential forces for the future wars will be developed by taking physical agility and flexibility into account. Those new forces and capabilities will form future strategies by uniting highly qualified personnel with well-trained forces. These forces are sensitive to the influences of air attacks, missile fires, info ops and Special Forces. Because of that, it is crucial to ensure the survival of forces in the battlefield. In this respect, those are in the agenda for survivability measures; setting up the units as small groups instead of stable facilities, being in action permanently, avoiding the electronic or thermal tracks. Simultaneous and parallel wars are the basis of future wars in order to capture strategic targets. Battles of the 21st century are foreseen in three categories;¹³ conventional conflicts, nuclear operations and the special wars. The first factor that affects the structure of future wars is the possibility of the long distant battlefields from home. So we will face the emergence of new strategies either based on the armed or/and disarmed forces. Force structures in the 21st century must win the combats by fighting essentially in all forms of the wars in all weather conditions and in all types of battlefields. Innovations in technology will develop those capabilities that are mentioned above. However, war is the fight of determination and will of human beings, not machines. Determinant factor of the victory is the well trained and strong units. Determination, patience and sacrificing oneself are the most effective qualities to react to the technologically dominant and huge forces but insufficient to endure for the long term conflicts.

The combat environment of the 2020s will not be linear, dispersed in structure and with changing intensity. It will be shaped by the utilization of space as battlefield with the cellular and versatile features. In the future, major changes in the execution of operations will be sourced by prevalent

13 Sait Yılmaz, Ulusal Savunma: Strateji, Teknoloji, Savaş (National Defense: Strategy, Technology, War), (İstanbul: Kum Saati Yayınları, 2009), 224.

implications of weapon and info technologies. It is foreseen that a synergy will be created by the integration of numerical real-time censor-weapon connections, unmanned air vehicles, long distance sensitive arms, censor networks and data operations. That synergy will improve continuity in the battlefield by shortening the distance among strategic, operative and tactical levels of war.¹⁴ In the 21st century, strategic and tactical attacks will be made to sensitive sides of an enemy with three dimensional fires.¹⁵ The secret of their effectiveness is the precision systems, digitalization and the seamless engagement. The wars in the future will certainly be different from the ones in present time in some aspects. All in all, we will have weak enemies like non-governmental terrorist organizations launching dirty wars asymmetrically. The modern war necessitates many tactical instruments in order to defeat, weaken or deter the enemies from their intentions. Those tactics include asymmetric aggression methods that are based on the conventional force less while using advantages of the technology much more. For that reason, land, navy and air force units must be in harmony with the Special Forces. Wars in Afghanistan and Iraq have proved that members of Special Forces perform the crucial missions. The new wars will cover special war methods more while role of the central army will be limited to those kinds of conflicts in general.

The Future Wars

In many ways the ending of the Cold War has not really changed anything. While the post-Cold War era may appear to be characterized by ‘new wars’, these conflicts, which have witnessed the horror of ethnic cleansing, mass rape and the plight of refugees, as for example, in Bosnia and Kosovo, were actually foreshadowed in earlier confrontations. In fact many of the features of global politics which have been seized upon as new in the post-1989 period are not new at all. Most regions of the world have real conflicts in them that have erupted, or could erupt, at almost any moment, and which require careful monitoring and thought if they are to be contained or managed, let alone solved. The dramatically altered geopolitical landscape presents a huge challenge for the international system as well as for the United States, which has been the security guarantor of the post-World War II order. The possible contours as several trends develop— including rising powers in Asia, retrenchment in Eurasia, a roiling Middle East, and greater divisions in the transatlantic partnership—remain uncertain and variable. There never was a simple peace world, and it has never been easy to guarantee security for most of the world’s population. In that study, we investigate the possible conflicts areas in Eurasia in considering great power completions.

The very collapse of superpower competition has irrevocably transformed the contours of great power relations.¹⁶ Great power conflict escalating into total war is likely. The United States will

14 Montgomery C. Meigs, *Operational Art in the New Century*, Parameters: US Army War College Quarterly, Vol. 31, No.1, (Spring 2001), 4-15.

15 Jonathan Bailey, *The First World War and the Birth of the Modern Style of Warfare*, Occasional Paper No. 22, (Camberley: Strategic and Combat Studies Institute, 1996), 31.

16 Caroline Kennedy-Pipe: *From Cold Wars to New Wars*, in *International Security In A Global Age*, Edt Clive Jones and Caroline Kennedy-Pipe, Frank Cass, London, 2000), p.1.

see its relative power position eroded, though it will remain by 2020 the most important single country across all the dimensions of power.¹⁷ China, India, and other developing countries' growing energy needs suggest a growing preoccupation with energy, shaping their foreign policies. Rising powers will see exploiting the opportunities afforded by the emerging global marketplace as the best way to assert their great power status on the world stage. They will seek to develop their ability to manage flashpoints and competition for resources. Obama administration has abdicated from world leadership, and the "pivot to Asia" is really a retrenchment to America. The "pivot to Asia" has encouraged American allies throughout the region to take a more aggressive stance towards China, inflaming potential flash points throughout the region. In the case of Japan, Obama officials have repeatedly declared that Washington is committed to siding with Tokyo in any conflict with Beijing over the Senkaku/Diaoyu islands. Estimates for proven and undiscovered oil reserves in the South China Sea range from 28 billion to as high as 213 billion barrels of oil, the U.S. Energy Information Administration said in a March 2008 report. That would be equivalent to more than 60 years of current Chinese demand, under the most optimistic outlook, and surpass every country's proven oil reserves except Saudi Arabia and Venezuela, according to the BP Statistical Review.

In addition, the Korean peninsula remains a dangerous flashpoint as the Pyongyang regime persists in advancing its nuclear weapons and ballistic-missile programmes. A similar dangerous flashpoint in the Middle East is caused by Iran's nuclear and ballistic missile programmes. In sum, there are great lists of security concerns regarding fundamentally sovereignty issues in all around of Eurasia. As a rule, a sovereignty problem inevitably implies hard power use in their resolution. For the case of Eurasia, it is not hard to see the war potentials in many hot points linked to each other. The U.S. aims to prefer to use technology based capabilities to great army concentrations instead in those wars. Missile Shield Project is the messenger of those wars, as the determinant military capability of the future military conflicts. To the Western powers, Russian association is a must to utilize the missile defense system in that great geography of Eurasia from Iran to Korea and China. That system is configured for the wars in Iran (2018), North Korea (2025) and, China (2035) sequentially. Like the China, Obama administration is currently busy with the economic and domestic issues to tighten their mussels for future by leaving the wars for the next presidents. Certain proof of that forecast is the ongoing army transformation efforts and new concept of pivot area. There will no winner of those wars rather than defense industries of global capital monsters. In addition to wars above, with the dissolution of Russian Federation due to the demographic trends and internal conflicts, we probably face a very different Eurasia than the present one in 2040.

¹⁷ Kennedy-Pipe: *ibid*, (2000), p.11.

Conclusion

Although there are many technological developments today, military tactics and doctrines have preserved their basic principles; combined army concept, overlapping integration of fire and movement, utilization of cover and concealment to attack, depth of the defense and existence of reserve forces. In the new security environment, as the missions such as the regional and civil wars, humanitarian aids, peace operations, counter-terrorism aroused, the present armies are in need of mobility and flexibility more in comparison to the past. In this study, the aim is to focus on the findings about relation of war and technology, possible forms of modern war, and finally the future armies in terms of transformation of defense in the 21st century. In conclusion, we need new armed forces for the new century. In the future battlefields, there will be no bases to arrange the forces, not enough time to form a sophisticated force structure and the enemy will try to destroy the allies with indirect engagement. An appropriate force for that kind of battlefield requires such capabilities as new, professionally designed technologies, light, with high maneuver and survivability, beating any type of enemy, being ready for all complicated combats, being able to work with minimum infrastructure and support. In this respect, the main combat vehicles and weapons of the land, air and navy should be developed based on these characteristics and reinforced with the other systems, especially space systems.

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