

ANNALS OF THE ACADEMY OF ROMANIAN SCIENTISTS
Series on MILITARY SCIENCES

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FOREWORD

*General (ret) Professor H.C. Vasile CÂNDEA, PhD
President of the Academy of Romanian Scientists*

The "Military Science Annals", edited by the Military Sciences Section of the Academy of Romanian Scientists, is already a landmark biannual publication in the field of military sciences, especially in that of military art. This year, following the success of the previous issues, the Military Sciences Section of the Academy of Romanian Scientists gives us a re-dimensioned format, which will be issued in Romanian four times a year, and in English twice a year.

In the first issue, the prestigious group of authors presents us valuable and interesting papers on military art, on military strategies mainly, on the art of planning and waging wars, on the art of successful combat.

Military art and sciences, located in the social and political crisis area, taking into account the philosophy of situations on the brink, contain force conflict, threat, deterrence or violence as well as crisis management methods and ways, because they are both art and sciences for resolving a dispute, for issuing a strategic situation, and for reestablishing normality in this way – the last solution – and avoiding proliferation of conflicts, generation of chaos, arbitrariness or dictatorship. At the same time, they promote the art of dialogue, of a certain type of dialogue though, because war is nothing but a sequel of politics by different means. War is a product of interests, i.e., of politics, being part of political, social, economic and cultural relations. Although war is a reaction against tension, crisis and conflicts, war is less and less agreed by states, international security organizations, communities or people.

The antagonism between nomad and static populations on the Euro-Asian continent started in the 4th century B.C. and lasted for approximately 1,800 years, which is confirmed by the fact that the great population movements took place on ground and not on oceans or seas... Europe was harassed by Huns, Avars,

Hungarians, Turks and Mongols, skilful riders and very good archers, who influenced the military art and science for millenniums. The migratory populations imposed the military confrontation offensive spirit, swift military actions and flexible troops. They used to wander in the troubled Asian space located between the Caspian Sea and Manchuria, from where they attacked China and then Persia. South East Europe, in turn, was also invaded successively by Goths, Visigoths, Huns and Hungarians.

Ancient static civilizations set up in China, India, Persia, Mesopotamia, Egypt, Greece, Palestine, Syria, Italy, Tracia and Dacia, close to rivers, in mountain depressions, oases, and, as a general rule, in areas rich in natural resources.

The conflict nomad – static ended with the victory of the latter, consisting in the fact that the majority of these civilizations and peoples have preserved the most of their territories, languages and traditions to this day, and furthermore, they have assimilated the nomad and made them settle down or have influenced their culture.

There is a certain continuity in the space and spirit of the military art and science and strategic cycles in the philosophy of war, because every historical epoch has not simply taken over war, both in theory and in practice, as a political and social factor of the previous epoch and carried it on, but has taken it over as a cycle, repeating the stages it has had to go through.

When coming to the end, each epoch wages war in a type of a way too violent, maximum confrontation, making it unbearable, or even impossible to continue in that configuration. And for this reason it “renews” it, reconsidering it on different parameters, on other coordinates. At the end of Ancient times, war exterminated the defeated armies. War had become a massacre and that is why the Middle Ages abandoned this form of confrontation where armies destroyed each other and moved towards other formulas. Although in the Middle Ages deterrence and siege were used to obtain victory through symbolic fights or, if possible, without battle, the wars waged towards the end of this period come back to violence. In a similar way, the Modern and Contemporary Age comes to an end with the hecatombs of the two World Wars and the two nuclear explosions that erased Hiroshima and Nagasaki. Nowadays, the Information Age started with crisis management policies and strategies and anti-terrorist war, but what is the type of war that lies ahead at the end of this Information Age?



THE CONTEMPORARY MILITARY ART

Lt. Gen. Professor Teodor FRUNZETI, PhD

The issue of Military Art is becoming more and more complex as we approach the contemporary age. The main reason is the natural evolution of mankind correlated with the permanent changes in the international security environment and, in this framework, the triggers are globalization and the Revolution in Military Affairs. Thus, the contemporary Military Art is subjected to a complex process of evolution that includes both adaptations and transformations of its core elements at the strategic, operational and tactical levels. All these adaptations and transformations lead us to the idea that in the near future the military action will take place probably in a fluid and multidimensional battle space, whose main features are: asymmetric actions; mobility; decentralization; maneuver; flexibility; a wide range of air, ground, naval, outer space, information, psychological and special actions that will be conducted simultaneously at the strategic, operational and tactical level, etc.

Analyzing the history of the military art we can conclude that the problem related to it becomes more and more complex as we approach the contemporary age in our scientific research. The main cause is triggering a set of alert transformations in security and defense once the Berlin Wall fell, which symbolically marked the end of the Cold War. The international security environment features have changed significantly in the last two decades, making the world armies reconsider their existence and organization at all levels of action: strategic, operational and tactical.

Faced with non-state actors (terrorists, war lords or Jihad fighters) and given simultaneous missions of counterinsurgency, reconstruction and peacekeeping, the international security states and organizations started a complex process of adaptation to the new security and defence challenges. New concepts were developed, the methods and means of waging war were diversified, combining the theoretical and conceptual plan with the technological one, all leading to the idea that contemporary military art is in the middle of a revolution in the military (Revolution of Military Affairs)¹. Thus, the debates within

¹ **FOOK WENG LOO, Bernard**, *New Problems, New Answers? The Revolution in Military Affairs in an Era of Changing Security Concerns*, Proceedings of the NIDS Symposium on International Security Affairs Military Transformation in the 21st Century: Challenge for New Security Environment, February 2006, Tokyo, electronic version:
<http://www.nids.go.jp/English/dissemination/symposium/e2005.html>.

the subject matter of strategic security and defense studies are based on the idea that the radical changes in military technologies and related areas fundamentally and dramatically change the way in which the military forces are organized, the way they work and carry out their strategic functions.

1. Contemporary military art, under the influence of a new stage of the revolution in military affairs.

The beginning of the 90s meant the initiation period of the current stage of revolution in military affairs (RMA²). During the Gulf War (1990-1991), the peak of using the information technology for military purposes had been reached. The new technologies increased the capacity of the coalition forces to exchange information, but also to prevent the enemy from communicating with its own forces³. However, the most important capability highlighted in this war was the so-called “surgical strike”, which represents the ability to hit and destroy objects with maximum accuracy and minimal collateral damage remotely, through missiles and arms systems, in any weather conditions.

The distinctive transformations of the new stage of RMA which have influenced contemporary military art are obvious, especially in the case of the United States of America, in the interventions in the Balkans, Iraq and Afghanistan. According to Björn Möller, one of the most important RMA⁴ experts, in the case of the Balkans the initial strikes were direct cruise missile launches against the air defence and command system of the Serbian troops. In the last phases of the war, the effort was directed towards strikes against the Serbian forces in Kosovo, but with no extraordinary effect. The reason was the air campaign conducted on the grounds of “zero victims”, which dictated special flight patterns (i.e., high altitude strikes) for the B-52 bombers. It should be noted that A-10 ground attack aircraft or helicopters which would have effectively engaged the enemy forces but would have produced casualties were not used⁵. It is obvious that the intervention in the Balkans was an “RMA war”, but its results raise questions in this respect.

In December 1998, Operation “Dessert Fox” proved how an RMA strategy, which worked in the case of Kosovo, might fail if applied in other areas, such as Iraq. Iraq’s compliance with the Security Council’s resolution no. 687 from 1991 was considered unsatisfactory, so that the USA raised the problem of the unilateral use of force. In

² *We chose to use RMA, because, no matter the origin, it has become a habit to use the American abbreviation for the revolution in military affairs.*

³ **IBRUGGER, Lothar**, *The Revolution in Military Affairs*, Special report, Science and Technology Committee, NATO Parliamentary Assembly, 1998.

⁴ **MÖLLER, Bjorn**, *The Revolution in Military Affairs: Myth or Reality?*, The institute for Peace Study, Copenhagen, 2002, <http://www.copri.dk/copri/researchers/moeller/bm.htm>.

⁵ **BYMAN, Daniel, A.; WAXMAN, Mathew C.**, *Kosovo and the Great Air Power Debate*, in “*International Security*”, vol. 24, no. 4 (spring 2004), pp. 5-38, MOELLER, Bjorn, cited work, 2002.

consequence, the USA launched a 4-day air campaign against Iraqi targets, the operation being a clear example of an “RMA campaign”⁶.

The war against the Taliban is a successful campaign because it succeeded to conquer Kabul, eliminating the Taliban regime. On the other hand, the campaign failed to achieve its main purpose: Osama bin Laden’s capture. Moreover, the level at which the air operation succeeded to carry out a ‘clean war’, with a small number of collateral victims, is not known. Part of the artillery used did not comply with this requirement but the efficient American control on mass-media managed to prevent pointing to civilian casualties⁷.

From the recent conflict in Afghanistan two elements emerged connected with the new type of war: on one hand, emphasizing camouflage and special operations and, on the other, renewing the short-term partnerships with local groups and hiring them as combatants or political agents. This “innovation”, which is, in fact, a revival of the Cold War practices, is expected to meet the deficiencies stressed in the Balkans campaign and in the Operation Allied Force in Yugoslavia, as well as the lack of land troops or agents. The technique and technology used by the USA in Afghanistan allowed for quick intervention and pursuit of some ambitious operational objectives and also for the launch of the operation on several lines (unlike in the Balkans and the Gulf War). However, the Afghanistan war shows some challenges which the USA and, by extension, other states will face in the following years and for which the RMA will be called upon to provide solutions.

The ongoing *war against terrorism* is a new clue for the RMA existence. It is obvious that the USA is preparing to face the asymmetrical conflicts; the 2001 terrorist attacks prove that a developed society is vulnerable to other forms of terrorist attack and, although they do not involve the use of weapons of mass destruction, they can have disastrous effects. In this context we should not ignore the danger of cybernetic terrorism, as a way of action of the terrorist networks, the al-Qaeda included⁸.

The Americans’ response to the 9/11 attacks was a multidimensional one. Next to the Afghanistan campaign, it included both diplomatic and legal initiatives and stressed once again the sphere of defence and domestic security (Homeland Security) of the United States of America. While the domestic security measures of certain institutions are obvious, it is difficult to identify the military prevention system to terrorist attacks, not to mention one which would be a revolution in the military.

The examples above show that the implications of technical and scientific development of mankind on the military marked a new stage in the history of military art. The procedures, methods and rules of classical military art were re-evaluated and adapted

⁶ MÖLLER, Bjorn, *The Never-Ending Iraqi Crisis: Dual Containment and the New World Order*, in *Oil and Water, Cooperative Security in the Persian Gulf* (London: L.B. Tauris, 2001), pp. 196-225, apud. Moller, Bjorn, cited works, 2002.

⁷ CONETTA, Carl, *Operation Enduring Freedom: Why a Higher Rate of Civilian Bombing Casualties*, in *Briefing Report*, no. 11 (Cambridge, MA: Project on Defense Alternatives, Commonwealth Institute, 2002), apud MÖLLER, Bjorn, cited work, 2002

⁸ ARQUILLA, John; RONFELDT, David; ZANINI, Michele, *Networks, Netwar, and Information-Age Terrorism*, in Khalilzad & White (ed.), *The Changing Role of Information in Warfare*, pp. 75-112, apud MÖLLER, Bjorn, cited works, 2002.

both to the new stage, requirements and possibilities of the combat means, and to the new types of military and nonmilitary risks, dangers and threats to security. Since the military art, as a scientific theory, includes strategy, operational art and tactics, i.e., elements that are interwoven, all these re-evaluations and changes are noticed at all levels, theoretical and practical, of organizing and waging the armed combat.

2. Contemporary elements of the military strategy

Currently, the strategy is dedicated to promoting peace in the same measure in which it analyzes the issues of waging war as a whole. If in the past centuries war was considered one of the main driving engines of change in the international relations system, in the last couple of decades preserving peace through nonmilitary means has been the most important goal of contemporary times. The complexity of the current features of the international security environment forces us to reconsider the idea that the military factor is essential in the security management.

Firstly, it must be noticed that military strategy exceeded national borders. If we take into consideration NATO's idea, military strategy is "that particular component of national or multinational strategy, which makes reference to the way in which the military power should be developed and applied so that the national objectives or those of a nation's group could be accomplished"⁹. It is about the need for integrated planning of military, political, social, economic and environment instruments, both nationally and internationally, in order to achieve and maintain an optimal security level.

By analyzing the large military strategy scope, we notice that the above mentioned changes are reflected even here.

Military strategy represents the highest level of military art, a system of scientific knowledge with reference to the armed conflict phenomenon. Taking into account this definition, we can state that military strategy is the result of joining the military doctrine principles with the experience of military confrontations, the analysis of current political, economic and military situation, and, last but not least, forecast on future wars. So, military strategy in its whole cannot be addressed solely in the light of present time, but, when referring to contemporary military art, it must be also analyzed through its contemporary elements.

Military strategy is influenced by globalization, and this aspect has been less analyzed by experts. The September, 11th 2001 terrorist attacks proved that, for example, terrorists can develop a global strategy by exploiting the specific elements of this type of phenomenon, as well as communication technologies, financial networks and people's freedom of movement. On the other hand, the military campaign that followed in response to the terrorist threat was considered as "the first war of the 21st century"¹⁰ and, implicitly,

⁹ *Military strategy*, in "NATO Glossary of Terms and Definitions (English and French), AAP-6(2006), electronic version <http://www.nato.int/docu/stanag/aap006/AAP-6-2006.pdf>.

¹⁰ According to the statement of the former American President George W. Bush, apud CAMPBELL, Kurt M., *Globalization's First War?* in "The Washington Quarterly", Winter 2002, pp. 7-14.

of globalization¹¹. Although these collocations do not meet the experts' consensus in terms of strategy, the main idea is that globalization has determined some significant changes in terms of waging war.

Some strategists think globalization reduces the use of military power in its dimension of war fighting capability and leads towards a decline in the use of force. Other experts think globalization is the way to opening new opportunities and methods of using military force in new types of conflicts¹². We believe that these two traits of globalization coexist and that the analyzed phenomenon currently gives both constraints and also freedom in using military power and outlines some new types of wars.

The impact of globalization on military strategy is neither universal nor uniform, but complex and unforeseeable. Military strategy is now based on cutting edge technologies, and one of its basic principles is to reduce the number of casualties and to improve the efficiency of military actions. The contemporary elements of the military strategy bring to the fore concepts such as network-centric warfare, the effect-based operations approach, the 5th generation of warfare, the long war, etc.

Network-centric warfare (NCW) is a concept specific to the current stage of RMA, its basis being the fundamental changes of the contemporary western society, especially in the areas of economy, technology and information, such as: the variation in the center of the C4-type network-centered platform (central network), the difference between independent vision (action) and the specific vision of a complex dynamic system that continuously adapts itself and, last but not least, the increasing importance of strategic options for adaptation and even survival in such changing systems¹³. NCW was based on integration in real and virtual networks of the collection and information processing systems (sensors), of the command and control systems and of the arm systems (battle platforms). This type of warfare ensures the speed of the management cycle, so that the difference between information and strike is reduced to a minimum, and the action (reaction) thus becomes immediate. In consequence, NCW is a modern warfare type, where C4I2SR systems are used, organized in a centered network, a sensor-based network and a fighting platform network, all using information technology, highly performant weapon systems and outstanding technical capabilities¹⁴.

The NCW concept was criticized for a long time by the supporters of another concept specific for contemporary military art, namely "the fourth-generation warfare". This type of conflict, analyzed for the first time in the article "The changing face of War:

¹¹ VENNESSON, Pascal, *Global Fear, Local Ways of War: How Military Institutions Adapt to Globalization*, 2006 Annual Meeting of the American Political Science Association, August 30th – September 3rd, 2006, electronic version http://www.allacademic.com/p_mla_apr_research_citation

¹² VENNESSON, Pascal, *Global Fear, Local Ways of War: How Military Institutions Adapt to Globalization*, 2006 Annual Meeting of the American Political Science Association, August 30th – September 3rd, 2006, electronic version http://www.allacademic.com/p_mla_apr_research_citation.

¹³ POPESCU, Mihail, ARSENIU, Valentin, VADUVA, Gheorghe, "Military art over the millenniums", 2nd volume, Military Publishing-Technical Center, Bucharest, 2004, pp. 301-302.

¹⁴ *Ibidem*, pp. 302-303.

into the fourth generation¹⁵ in 1989, was characterized by blurring the razor edges between political, military and civilian and involves elements such as: complexity and long duration; terrorism; highly decentralized transnational base; direct attack on the enemy's culture; psychological war of high complexity, especially through media manipulation; use of all types of available pressures (political, economic, social and military); involvement of actors from all networks in a low intensity conflict. Also, this concept is criticized because it is believed that, in fact, we are talking about insurgencies, the analyzing pattern of generation-based warfare being inefficient in identifying the actual changes.¹⁶

Today, they speak about the Fifth generation warfare, which touches upon the specific issues of the previous generation. The fifth generation warfare is exclusively a war against nonstate actors¹⁷. In this type of warfare, the gravity center is not a big enemy leader that can be killed or an enemy army which can be destroyed. For instance, while the Islamic radical organizations are divided, they become more and more dangerous because it is not their capacity which disappears but their mass and gravity center that can be struck. The fifth generation warfare implies terrorist spontaneous and anonymous attacks against some undifferentiated targets (civilians and military personnel), its sole purpose being to create confusion and fear¹⁸. This concept is not yet fully structured, but it is obvious that it is a product of the new technologies, hence of the contemporary stage of NCW.

In fact, both fourth generation wars, as well as the the fifth generation ones are *dissymmetric and asymmetric wars*. On one side there are the high-tech powers, on the other side there are the antinomian entities which regard both access to high technologies and the preservation of certain conservative or retrogressive attitudes¹⁹. In theory, dissymmetric wars make reference to two completely different forces, usually disproportionate and inconsistent, situated face to face, and only one of them has the possibility to influence the other (or without one influencing the other)²⁰. At the same time, the asymmetric wars imply two totally distinct forces, usually disproportionate and inconsistent, but which influence each other asymmetrically and efficiently.²¹

The issue of dissymmetry and asymmetry and also of symmetry often comes to the terrorist war and to the war against terrorism. The world's whole conflict state – military or

¹⁵ LIND, William S.; NIGHTENDALE, Keith; SCHIMTT, John F.; SUTTON, Joseph W.; WILSON, Gary I., *The Changing Face of War: Into the Fourth Generation*, in Marine Corps Gazette, 1989.

¹⁶ ECHEVARRIA, Antulio J., *Fourth-Generation War and Other Myths*, November 2005, p.10, electronic version <http://www.StrategicStudiesInstitute.army.mil>.

¹⁷ COERR, Stanton S., *Fifth Generation War. Warfare versus the Nonstate*, in Marine Corps Gazette. January 2009, p. 63, electronic version <http://www.marinecorpsgazette-digital.com/marinecorpsgazette>.

¹⁸ *Ibidem*

¹⁹ MURESAN, Mircea; VADUVA, Gheorghe, *War of the future, the future of war*, National Defence University Publishing House, Bucharest, 2006, p. 275.

²⁰ VADUVA, Gheorghe, *The symmetry, dissymmetry and asymmetry in current military conflicts*, National Defence University Publishing House, Bucharest, 2008, pp. 15-16.

²¹ *Ibidem*

non military – goes to this spectrum that combines the three dimensions, sometimes by very precise rules applied with a lot of ingenuity and sometimes at random or chaotically. Between the precision of some rules established by the early wars and armed conflicts and the imprecision and unpredictability of some combinations, mergers, flexibilities, evolutions and chaotic revolutions there is the entire art of confrontations, but also of armed conflicts and crisis management²².

Another concept specific to modern days is the *effect-based operations*. Some experts call this approach *action and concerted planning* or *comprehensive approach*²³. It is an effect-based process in which the commandant is told about the effects that must be accomplished on the battle field, and he is the one who has the liberty to make his own decisions regarding the way in which the effects are achieved. The strategic effects have an impact on the specific target-audience, which comprises all political, military and economic capacities, as well as its psychological stability. In a battle scenario, one of the strategic effects might be the annihilation or limitation of the enemy's ability or will to lead or continue war, by destroying or disorganizing the gravity centers and other targets or groups of vital targets. The gravity centers generally include the command and control system, war production, the land forces and the infrastructure key-elements that support the war effort. The strategic effects can be the result of the actions of land, air and naval forces, carried out at a lower level of commitment and usually take more time to be manifest than the tactical or operative ones²⁴.

Finally, one of the latest concepts used in the contemporary military strategy is the *long war*. We are referring to the war against terrorism, initiated by the USA, whose large spectrum determined the experts in military strategy to call "long". Some of them define it as a large-scale battle with enemies determined to create a united Islamic world that would replace "the western domination"²⁵, while others consider that the long war is nothing but an extension of the war against terrorism²⁶. Quite recently, in 2004, it was brought into discussion by General John Abizaid, the former Commander of USCENTCOM. Far from being a concept at that time, the term has subsequently been used in various papers such as the book *Winning the Long War: Lessons from the Cold War for Defeating Terrorism and*

²² VADUVA, Gheorghe, *The symmetry, dissymmetry and asymmetry in current military conflicts*, National Defence University Publishing House, Bucharest, 2008, p.70.

²³ Interview with general Lance L. Smith, *The Supreme Allied Commander for Transformation*, in *NATO Magazine*, 2006, summer, electronic version <http://www.nato.int/docu/review/2006/issue3/romanian/interview.html>.

²⁴ GRECU, Dan-Florin, *Notions regarding the term "effect" used in general concept of effect-based operations*, in "Land Forces, Military theory newsletter", no. 2/2009, electronic version http://rtf:forter.ro/2009_2_t/01-trsf/02.htm.

²⁵ PERNIN, Christopher G.; NICHIPORUK, Brian; STAHL, Dale; BECK, Justin RADAELLI-SANCHEZ, Rick, *Unfolding the Future of the Long War. Motivations, Prospects, and Implications for the US Army*, RAND Aroyo Center, 2008, p.1.

²⁶ BORER, Douglas A.; BERGER, Mark T.; *All Roads Lead to and from Iraq: the Long War and the Transformation of the Nation-State System*, in "Third World Quarterly", volume 28, No. 2, Routledge-Taylor and Francis Group, 2007, pp. 457-463.

Preserving Freedom, written by James Jay Carafano and Paul Rosenzweig Washington and published in 2005, also in the January 2006 speech of the US President on the State of the Nation and in *Quadrennial Defence Review* (QDR) in 2006.

Even if this concept was criticized, being considered a mere core justification for promoting a permanent war, its introduction in the analyses of the American Department of Defense propelled it to the debates on military strategy at all decision levels. Thus, some analysts remarked that, although its four basic aims – i.e., the defeat of the terrorist networks, the in-depth defence of the American territory, the guidance of the decisions made by countries at “strategic crossroads” and the prevention of the acquisition and use by the hostile states of weapons of mass destruction – are specially important to accomplish national security goals, QDR does not explain why these features are specific for long wars²⁷. Other experts, as the former Chief of the Naval Operations, Admiral Michael G. Mullen, and the Commander of the Marine Corps, General James T. Conway, state that the wars in Iraq and Afghanistan do not constitute unique events, but a part of a set of fights associated to long war. Also, Admiral Mullen uses this term to explain the length and dimension of the actions that will be necessary in order to solve the security problems of the Middle East²⁸, as well.

Therefore, we notice that both the new stage of RMA and the characteristics in a permanent change of the international security environment determined the emergence of new concepts at the strategic level, which allow for the adjustment to new types of risks, dangers and threats of military and non-military nature to the national and international security. Following the levels of military art, these conceptual changes and innovations were also extended to the tactical and operational level, as we will further show.

3. Contemporary elements of the operative art/operational level of war

Operative art is dependent on the technological development, whereas it elaborates the processes of planning and command of operations according to the principles of military science, means of action and characteristics of the military theatre of operations.

In the American literature, operative art is defined as the application of creative imagination by commanders and the personnel, supported by their skills, knowledge and experience, to design strategies, and operations meant to organize and engage military forces²⁹. Here, and also at NATO level, we can talk about the operational level of the war as a level at which the important campaigns and operations are planned, commanded and supported, in order to reach the strategic objectives on the theatres or other operation

²⁷ PERNIN, Christopher G.; NICHIPORUK, Brian; STAHL, Dale; BECK, Justin; RADAELLI-SANCHEZ, Rick, *op.cit.*, 2008, p.6

²⁸ *Ibidem*, p.8.

²⁹ *Operational Art*, in „DoD Dictionary of Military Terms and Associated Terms (As amended through 31 October 2009)”, electronic version:
http://www.dtic.mil/doctrine/dod_dictionary/data/o/37.html

zones³⁰. Thus, operative art is considered to be a creative process by which the necessary actions meant to meet strategic aims can be realized at the operative level.

A clear example in this sense is the analysis of the operational requirements of the *network based war* (RBR). As we previously showed, RBR compacts the time and space of the fight, at the same time with the extension of the coverage and ambush area of the actions and reactions. Access to data base and real-time information, to the network and the quasi-concomitant decision with its execution lead to an increase of the integrality of the actions and operations and, obviously, of the strategies to be applied³¹. Having to do with an integrated combat space, the operations specific for RBR are also of an integrated type, with the following characteristics: space-time amplitude, sequenced activities which take place throughout it, from the preparation stage to the final one; sequence of actions which vary according to the concrete conditions on the theatre of operations, of the combat and war space; capacity for self-adjustment. In the integrated type operation all these elements are interdependent, i.e., each varies depending on the others, in a certain succession or simultaneity of moments or phases and reconfigures itself according to a certain role, to the prevailing maneuver, which is flexible, adaptable in each phase to its new situation in this type of war³².

Another concept which reflects at the operational level the new characteristics of the international security environment are the *expeditionary operations*. Although from the content point of view it is not new, this concept was brought again into discussion especially after the end of the Cold War.

NATO defines this type of operations as the “projection of military power beyond the lines of communication extended in a remote operational area meant to fulfill a specific objective”³³. The concept of expeditionary operations is one of the main domains (along with informational superiority, NATO’s network-based capability, efficient engagement, congregated maneuver, civil-military strengthened cooperation, and integrated logistics) that will lead to the fulfillment of the three objectives of transformation: i.e., coherent effects, congregated dislocation and sustentation, decisional superiority³⁴.

The USA refers to the same type of operations by two concepts: *expedition* and *expeditionary force*. Expedition is defined as a “military operation led by an armed force in

³⁰ *Operational level of war*, în „DoD Dictionary of Military Terms and Associated Terms (As amended through 31 October 2009)”, electronic variant: http://www.dtic.mil/doctrine/dod_dictionary/data/o/37.html și în *NATO Glossary of Terms and Definitions (English and French)*, AAP-6(2006), electronic version: <http://www.nato.int/docu/stanag-aap006/AAP-6-2006.pdf>

³¹ VĂDUVA, Gheorghe; RĂDUICĂ, George-Teodor, *Cerințe operaționale în războiul bazat pe rețea*, Editura Universității Naționale de Apărare “Carol I”, București, 2007, pp.31-32.

³² *Ibidem*, p.32.

³³ *Expeditionary operation*, in *NATO Glossary of Terms and Definitions (English and French)*, AAP-6(2006), electronic version: <http://www.nato.int/docu/stanag-aap006/AAP-6-2006.pdf>.

³⁴ ALEXANDRESCU, Grigore; BĂHNĂREANU, Cristian, *Operații militare expediționale*, Editura Universității Naționale de Apărare “Carol I”, București, 2007, p.10.

order to fulfill a specific objective in a foreign country”³⁵, and expeditionary force as an “armed force organized to fulfill a specific objective in a foreign country”³⁶.

Although these concepts are currently applied in all services of the USA, they were initially and exclusively used by the US Marine Corps. In their acceptance, expeditionary operations and forces serve the interests and national security and are indispensable for crises response. The handbook “Expeditionary operations” of the Marine Corps sets the defining characteristic of an expeditionary operation as the projection of the force in an external environment, on the scene of a crisis or conflict³⁷. Thus, the effective expeditionary operations do not refer only to the projection of military power, but also to the sustenance of the respective power throughout the expedition (by creating advanced bases and logistical support, necessary transport and maintenance). According to the American concept, expeditionary operations consist of five phases of the action which imply strategic, operative and tactical considerations: force deployment in the area of operations, introduction of the forces on the foreign territory, preparative actions, decisive actions and withdrawal of the forces or transition to a permanent presence³⁸.

Expeditionary operations are divided into two categories: fighting expeditionary operations and expeditionary operations for stability and support. The first category refers to conflict military operations, which take place during the war, representing the most virulent, and also the most expensive component of power projection.³⁹ The second category refers to power projection with an international or at least multinational agreement. The records of the political-military practice of these last few years emphasize that this type of operations underlies the great majority of the expeditionary military operations. The two components (i.e., stability and support) are inter-conditioned, they have common parts, and also specific features (fields of action). Expeditionary forces can participate in these operations, along with forces of the host nation, as well⁴⁰.

Synthesizing the above, we can extract the most important characteristics of the expeditionary operations: they are fighting or stability and support ones; they can be strictly military or can also include civilian components (for example, in the case of humanitarian missions); they presume the existence of a force capable to execute such operations (prepared/instructed and with according supplies), generally named expeditionary force; the force is projected in a risk, crisis or conflict zone, outside the national territory or outside the area of responsibility; the force is supported by adequate logistics, transport and

³⁵ Expedition, in „DoD Dictionary of Military Terms and Associated Terms (As amended through 31 October 2009)”, electronic version: http://www.dtic.mil/doctrine/dod_dictionary/data/e/8825.html.

³⁶ Expeditionary force, in „DoD Dictionary of Military Terms and Associated Terms (As amended through 31 October 2009)”, electronic version: http://www.dtic.mil/doctrine/dod_dictionary/data/e/4086.html.

³⁷ U.S. Marine Corps, *Expeditionary Operations*, MCDP 3, pp. 32-33, electronic variant: <http://www.marines.mil/news/publications/Documents/MCDP%203%20Expeditionar%20Operations.pdf>

³⁸ ALEXANDRESCU, Grigore; BĂHNĂREANU, Cristian, *op.cit.*, 2007, p.9.

³⁹ *Ibidem*, p.27.

⁴⁰ *Ibidem*, p.28.

maintenance elements, which ensure short-notice deployment and high mobility; the command and control structure has the capacity of controlling the military actions of the deployed force.

By their characteristics, expeditionary operations reflect the changes and transformations of political-military nature at the global level, and, as a consequence, contemporary elements of military art. Thus, it is obvious that operative art represents the link between strategy and tactics, thus any change achieved within the framework of the strategic level of military art also reflects in the tactical one.

4. Contemporary elements of military tactics

Tactics is the most dynamic area of military art and is closely linked to the evolution of RMA. The relation between tactics and other areas of military art is undeniable, because it is configured according to the level of development of the armament and combat technique, and also by the strategic vision over the character of a possible war and the concrete missions which derive from the operative art. Both theory and tactics practice change with technological progress and improvement of the armed combat means, of the moral and defence capacities of the army.

The dedicated literature uses the concept of *tactical level*, representing that level of war in which fighting (combat actions) are planned and executed in order to accomplish the military objectives given to the units and tactical formations. The activities at this level are based on commitments and maneuver of the fighting elements, according to the situation of the enemy⁴¹.

If during the Cold War and the following years most discussions were about classic conflicts in which two armies faced each other, in the last decade the new operational-acting structure which the action devices have, especially for the land forces, determined the diversification of the tactics. To each of the types of forces- combat forces, combat sustaining/support forces and logistic support forces – a type of tactics corresponds: the combat forces tactics (the combined arms tactics), the combat support forces tactics and the logistical support forces tactics.⁴²

All types of tactics stated above have a series of common features which gain new valences in the context of globalization and of the current phase of RMA. One of this features – *ways, means and limited ends* – reflect the fact that contemporary military operations have started to have more and more limited strategic objectives, which could be defined once with the triggering of the military actions and could be modified during the confrontation based on clearly defined but flexible rules of engagement. We also talk about

⁴¹ *Nivel tactic*, in „Colecție de termeni militari selectați din „Lexicon militar“ și „Dicționar de terminologie militară – NATO - logistică“, Ministerul Apărării Naționale, electronic variant: <http://www.defense.ro/dictionar/> and in *NATO Glossary of Terms and Definitions (English and French)*, AAP-6(2006), electronic version: <http://www.nato.int/docu/stanag-aap006/AAP-6-2006.pdf>

⁴² **NEAG, Mihai; VIRCA, Ioan**, *Noi provocări în tactica Forțelor Terestre în contextul integrării euroatlantice*, in „Buletin Științific“, nr. 2/2004, Academia Forțelor Terestre „Nicolae Bălcescu“, electronic version: http://www.armyacademy.ro/buletin/2_2004/

the *forces projection*, as a way of preventing, deterring or stopping the potential belligerents, as well as the conflict itself. In contemporary conflicts the availability of the necessary transport capacities, both national and international, and of the adequate infrastructure is particularly important, because these determine the size and structure of the deployed forces, as well as the pace they need to become operational.

Another particularly important feature of combat and its related engagements refers to the *multinational character of the forces*. During the past years the armed forces were used significantly in alliances or ad-hoc coalitions, military operations becoming a consequence of fulfilling some commitments established by a treaty, respectively a mandate issued by an international security organization. In this case, the main factors which determine the planning of the military actions are: the interoperability of the forces both at conceptual and logistical level; the scope and complexity of the operations and, last but not least, the rules of engagement, which have to be harmonized and understood accurately from the very beginning of the action.

In this context we remark another feature of the tactical actions which suffered important changes in the post Cold War period, i.e., the *maneuver-like approach* to actions. In the asymmetric war, when executed either horizontally or vertically, the latter offers new, unexpected solutions, to defeat the will and cohesion of the opponent by a combination of surprise, shock, simultaneity and rhythm. Linked to it, we can also enumerate other specific features of combat and engagements at a tactical level: *the professional expertise*, without which we cannot talk about combat power of the military structures; *the physical and moral cohesion of the combat structures*, which reduces the effect produced by surprise, shock actions and massive destructions; *the sap of the enemies' will*, which together with other factors produces the rapid knock-out of his structures; *the hazard of the cohesion of the enemy*, which presupposes the exploitation of his vulnerabilities by maneuver and fire (precise, surgical strikes) and maximum surprise, superior pace and synchronization of actions, so that a shock and de-structuring effect on the cohesion of the enemy forces is accomplished.

The tactical level is the one where the *idiosyncratic* character of the military actions is most significantly visible, by factors like stress, friction, chaos and time pressure. In addition, the *asymmetry and dissymmetry* which characterize the contemporary military conflicts emphasize these factors. As fighting is one of the most stressful human activities, during military actions the reduction of creativity and the amplification of the preservation instinct can be registered, both as regards to the commanders, and to the fighters, at the tactical level of war. Friction refers to the frustration induced to the militaries by the actions performed, transforming the simplest actions at a tactical level in specially complicated ones, even impossible for the engaged ones. Also, in contemporary military conflicts the commanders of the tactical military structures can confront with situations in which they have to command their subordinates in an environment characterized by incomplete, contradictory or untrue information, which limit their perceptions and produce confusion and chaos. Finally, tactical actions take place under time pressure, the commanders of the basic levels of the military organizations having the complex task of orchestrating the different forces and means available for them, which reduces the time for the subordinates

to prepare the fight. In order to counteract these effects, it is necessary for the commanders of the higher echelons to anticipate the way of response to the pressure exerted on the militaries in the subordinate structures. The commanders of the strategic and operative level structures, being outside the fight itself, have a clearer perspective over the course of the developing military actions, which allows them to maintain the unity of vision and action of all the fighters who are in a different context. Thus, the unity of effort on base of the unique military objectives and the unanimously recognized military values is preserved.

Conclusions

Military art has not been spared of the events and phenomena which determined the evolution of mankind after the end of the Cold War, but has continuously adapted.

Globalization is one of the phenomena which have influenced military art, by gradually changing the nature of war. The armed combat remained the organized form of practicing violence, but it includes now an important civil component; objectives with maximum psychological effect are carried out, unnecessary casualties and damage are avoided. The classical principles of armed combat have not changed radically, but have received new valences, new completions which illustrate the physiognomy and nature of contemporary conflicts. Thus, these can be synthesized as follows: the clear and concise definition of the objective/mission, the unity of command, the freedom of action, maneuver, surprise, concentration of efforts in the decisive points and at the right moment for fast victory, economy of forces and means, security of actions, force protection, few human and material losses, as well as little environmental damage.

The revolution in the military area which is in turn influenced by globalization has also a direct impact on military art. The pivotal problem is that that no military force can afford to be static from the point of view of its nature and capabilities. Military and related technologies are upgraded permanently, and the capabilities and equipment become outdated. That is why, in order to remain credible and efficient, military forces have to transform periodically, both in technique and capabilities, and in concepts, doctrines and strategies. Thus, military organizations have to internalize not only new technologies and capabilities, but also – first and foremost – their *modus operandi*.

All these adaptations and transformations lead to the idea that in the near future military actions will probably take place in a fluid, multidimensional combat space. The main features will be: asymmetric actions, mobility, dispersability, decentralization, maneuverability, flexibility, integration of a wide range of air, land, naval, space, information, psychological and special actions, simultaneously led at the strategic, operational and tactical levels, continuously and at a sustained pace, aiming the decisive strike at the decisive points of the enemy and leading to fast victory by the latter's psychic and physical defeat.

Finally, we can state that contemporary military art is subjected to a complex evolutionary process, which includes adaptations, as well as transformations of its elements, from the strategic level to the operational and tactical ones. Nevertheless, the fundamentals of military art do not change, in the same way as the human society evolves without changing its essence.

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THE STRATEGIC EXPERTISE OF THE POLITICAL DECISION

General (ref) Professor Eugen BĂDĂLAN, PhD

The article that follows is a strategic study about strategy, strategic policy, strategist, policy, strategic expert, political decision, strategic examination of a political decision, strategic awareness and strategically turning a political decision into action in order to obtain a decision, a victory.

An expert in strategy means a specialist in the theory and practice of strategy, mastering the strategic art of defeating a superior enemy, and control over risk; he is an expert in the matter and performs analysis, synthesis, variant reading and suggests/proposes a course of action. Experimentally, the strategic expertise of the political decision means expertise in scientific research of the military phenomenon, strategic action, essential factors providing power and value, force development, force goal, force build-up, force distribution, force structure and financial resources in order to defend the Romanian national independence, sovereignty and territorial integrity.

The term “expertise” has the sense of research made by a high-class specialist (expert), a person who has special knowledge in a certain domain, over a situation, problems, etc¹.

The strategic expertise of the political decision means the research done by “Carol I” National Defense University, the Strategic Studies Institutions, the General Staff, the General Directorates of the Ministry of National Defense in areas such as the security environment, the military phenomenon, the strategic actions, the necessary forces, means and costs and the military connotations of the process of risk management, dangers, challenges, threats, non-military aggressions, military vulnerabilities, as well as of a political-military situation, by evaluations of the strategic situation and forecasts expressed in certain analyses, syntheses, variants and proposals for solutions.

The strategic expert is a specialist in the area of military art and sciences, war and research in military sciences, but also in the research methods and methodologies in these sciences. Furthermore, he is a high-class specialist in strategy, which represents a distinct domain of the military sciences, more precisely of military art, which means that not any military theorist is also a strategist.

¹ *Mic dicționar enciclopedic*, Ediția a II-a, revăzută și adăugită, Editura științifică și enciclopedică, București, 1978, p.360

Therefore, the expert in strategy masters the art of thoughtfulness of substantiation of the political decisions, the art of thinking and acting or of well thought action, where science is the result of experience, and creating intelligence collocates with pragmatism. Because this special military expert, a “diamond” among other experts, controls the strategic art and has the force to design strategies by valuing the force of the mind, which springs from the universe of knowledge and underlies the backbone of experience in the dynamic space of effective and efficient action.

The strategic expertise of the political decision is the privilege of intelligent, creative, intrepid, audacious people, who know that the odds are on the side of courageous and intelligent people. Out of the hundreds of thousands of skilled leaders and worthy commanders of the modern and contemporary world, very few have the quality, capacity or force to be strategy or strategies makers. As a consequence, the quality of being a strategic expert of the political decision belongs undoubtedly only to the chosen ones, to the elite, that are great masterminds in the domain of strategy².

We consider that the strategic expertise of the political decision is mandatory in today’s Romania, due to the geo-political and geo-strategic position of our country, with many risk factors, old and especially new, both international and internal which threaten the fundamental values of the rule of law, of the European Union and of the North Atlantic Alliance. That is why the National Security Strategy, as well as the Military Strategy of any state, and therefore of Romania, have to be periodically re-designed in the vision of the new protection requirements of the Romanian citizens and of guaranteeing their fundamental rights, individual freedom, as well as of guaranteeing the sovereignty, independence and unity of our state, the territorial integrity of the country, in the long run even by using military force.

Policy without strategy, without strategic expertise, is like a headless body or brainless head, a thing which has been demonstrated since ancient times in confrontations such as the experience of the Vietnam or Korean wars.

The expert in strategy is and is not the same as in the more or less distant, that means the one who knows how to put into practice, into operation, a political decision based on science, art, experience and ability to turn into life the dialectics of the will of one side and of own forces in conflict with the other side. Today he is more than he was before, because strategic expertise means a strategy which has suffered significant upgrades. It has extended to almost all domains and approached very much the dimension of the political decision which is, as we all know, a political strategy. The explanation consists in the fast development of the scope and content of the strategy as regards the new dialectics of the confrontation philosophy of today’s world. Nevertheless, the expert uses in his analysis the same strategy, which is science, experience, practice and the art of putting into operation the political decision by scientific rigor, judicious planning, realistic organization, exploitation of knowledge and information and accomplishment of the political objectives, by discovering the ingenious connections and determinations in order to get higher efficacy

² Eugen BĂDĂLAN, Valentin ARSENIE, Gheorghe VĂDUVA, *Eseu despre arta strategică*, Editura Militară, București, 2005

and an optimal efficiency. Nevertheless, the strategic expertise considers the widening of the conceptual scope of strategy, the enlargement of the applicability space, the multiplication of the definition coordinates, the entwining of principles and methods, their integration, the closer mutual reliance and their reformulation, as well as the multiplication of the connections and interdependences, which permits the holistic approach.

This expert never forgets that nature and life are domains with numberless events, connections and results which spring from a dynamic and complex phenomenology, and realizes that in time, the more he knows, the less he knows, because as the more knowledge and information we gather, the more our knowledge or necessities for knowledge increase. Anyway, the expert thinks in the space between political decision and action as a designer, builder, planner and organizer of the action. Without this strategy which the expert projects the political decision cannot become operational because the resulting action would be chaotic, incoherent, uneconomical in point of resources, and the results would be questionable and inefficient. That is why strategies are always needed, as long as politics exists. That is why experts are needed all the time, to mediate, to implement decisions, to translate plans into efficient and viable actions in order to lead to the achievement of the objectives.

The expert has foresight and builds action plans or strategies depending on the available resources and forces, on the political objectives and the established goals, but also according to the principles and laws for action, for peace and war, because humanity is today in a continuous war. As a consequence, the strategic expertise presupposes creative, cumulative and associative capacity, to design a strategy, i.e., any strategy. The choice or use of a strategy is a complex creation process even in the situation of choosing and connecting some principles, norms or rules related to the concrete conditions of the international security environment. Therefore, the expert uses the strategic knowledge as a way of projecting and designing the actions, based on the objectives established by the political factor, on the available forces and resources (financial, economic, technical, logistic, of time and of other nature). The expert who puts into equation all these elements, or better said variables, proves that he is in control of the strategic art and that he is a creator of art.

Because sometimes the political decision is made in conditions of uncertainty, depending on an uncertain event, on a subjective factor, it is mandatory that strategy, as a science, art and experience of using the forces, means and resources to accomplish it, ensure a certain resistance to voluntaristic behavior, ventured by the corresponding expertise of the political factor.

In this kind of uncertainty conditions, of political stammering, the strategic expert's opinion necessary, to ensure the quality of the cohesion between strategic theory and strategic art, between strategy and politics. It turns out that we have to beware of the temptation of merging strategy with politics and of abolishing the expert from this relationship, because the distinction between the political level and the strategic one is necessary and useful. The strategic and the political expert as well operate with theories, experiences and specific instruments, and the political person does not control those of the strategic space well enough, but the ones from the political sphere.

In order to fulfill his role of putting the political decision in operation, the military expert needs all the necessary means and procedures at his disposal.

Politics has especially the quality of art and science of solving the problems of the power of the state, which means art in politics has approximately the same role that it has in strategy. Experts from both domains know that political art generates policies and strategic art generates strategies.

Politics is a provider of freedom, more precisely freedom of action, but has to leave, may impose a sufficiently wide space to freedom of maneuver where strategy can organize and develop its own domain, in which the expert can build the strategies of putting in operation the political decisions. In other words, the political decision-maker, whoever he may be, has to transfer the authority of the strategic domain, respectively the strategic expert, whom he controls, but at the same time he should let him make the strategic expertise because somebody else cannot do it better. The military expert uses strategy as an instrument, as theory and methodology, experience and creative art and by his expertise he offers a wide but unitary, coherent range of forms and procedures for planning and organizing the action to political decision, in its different elaboration phases. The strategic expert perfectly controls both the inter-determination relationship between the political sphere and the strategic one (**figure 1**).

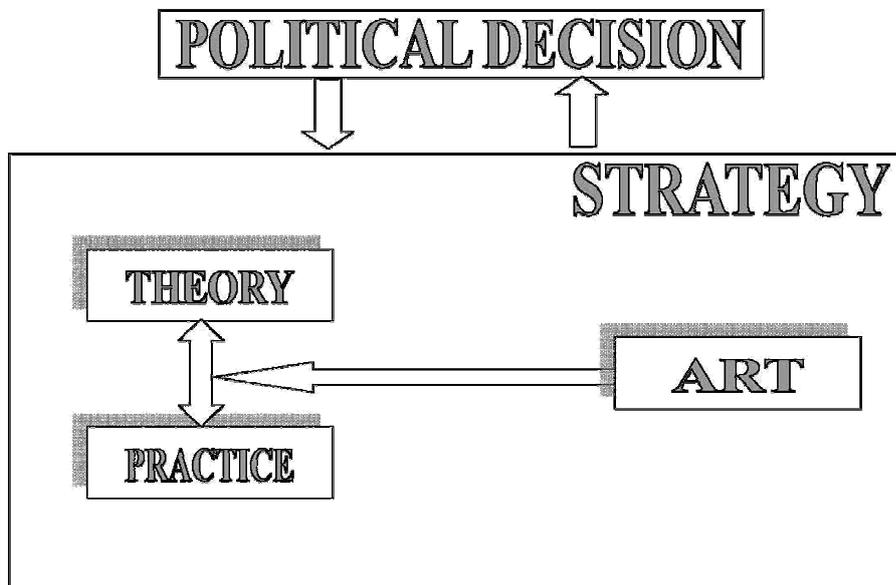


Figure 1: The interaction between strategy and political decision

Strategic expertise is applicative mathematics and logics of politics, especially of military and security politics, because the political expert tells the strategist what to do and

where to go, and the latter knows what to do and how to get there. For this, every idea, every decision, in order to become operational, needs a certain strategy.

The habit of making strategy and strategies is as old as the world itself, just that in the last century it left the military domain to be successfully included in the other fields in which conflict exists: economy, finances, international relations, the social sphere, etc., because strategy gives flexibility, intelligence and adaptability to the creative dialectics of the wills which confront each other in action.

Beaufre said the aim of strategy “to project a decision by which a situation which handles the moral disintegration of the adversary, in order to determine the latter to accept the conditions imposed to him”³ should be created and exploited. Sun Tzu thought the same over two millenniums ago. The decision belongs to politics, and the projection of putting it into practice, or the expertise which has to precede and accompany its elaboration belongs to strategy. This means that strategy participates, directly or in an interposed way, as an expertise to making the decision (**figure 1**).

Before initiating the operations in the Gulf, in March 2003, the United States President and the Congressmen knew precisely what forces and resources were necessary, which would be the stages of action, how the force projection had been made, which would be the losses, in what consisted the confrontation risk and how long action would last. The confrontation between the political and strategic rationales led to the decision of starting the hostilities.

The strategic essence lies, in Beaufre’s opinion, in convincing the the opponent that engaging or continuing the fight is useless, which means strategy goes beyond the strict military space, becoming also an art of negotiating, of obtaining an effect, and especially of imposing its own will. At the same time, Beaufre shows that strategy is “the fight for freedom of action”. In assessing the freedom of action, which is an old principle in military art, the military expert starts from the idea that this is not obtained solely by the appropriate containment of the opponents’ freedom, but also by the “dialectics of wills”, that means by flexibly building a space of information and strategic domination, in which the freedom of the other is “dependent” on your freedom, and not viceversa. That is why expertise makes allowance for the fact that strategy is not only an art of cheating on the enemy, but also an art of imposing will on him, of abolishing direct, implicit or collateral tensions and for solving conflict situations. Furthermore, strategy helps propose possibilities of getting access to the “well-being” to which people aspire. The capacity of the political factor is expressed not only by the authority of decision, but also by the way in which it knows how to choose what the military experts propose, with the aim to overcome obstacles⁴ and optimize the commitment system (i.e., political, economic, military, etc.) based on forces, means, resources, aims and objectives. It is the inverse relationship strategy-politics, the

³ André BEAUFRE, *Introducere în strategie. Strategia acțiunii*, Editura Militară, București, 1974.

⁴ <http://www.departmentofintelligence.com/fr/geopolitique/geopo6.html>, Julien Ducl, *op. cit.*

manner by which strategy puts at the disposal of politics the forms and ways of action in order to realize the established aim. Here it is about the expertise function of strategy⁵.

In order to elaborate a definition usually it is necessary to use the proximate genus and the specific difference. Both permit a good identification with the domain, the location and delimitation of the phenomenon, process or respective activity. But there also are descriptive definitions which are used if a genus cannot be clearly delimited in the case of defining the strategy. Even if, in this case, the proximate genus is the social or human action, and the specific difference is in the plan of violence, of using violent means, the differences that were and are given to strategy are usually descriptive. Whatever definitions would be adopted, strategy – military strategy, of course – as a form of war (i.e., a complex social phenomenon, complicated and very destructive), but also as a war instrument, remains a domain which concerns mankind.

Strategy is not only in the line of war because it supports, gives expertise and puts into operation the idea that “living means fighting”⁶.

Military strategy represents not only science and experience, but also the art of putting in operation of a political decision referring to composing, preparing and using forces and means necessary to war and armed fighting, but also theory, practice and art of war and armed fighting, as well as a modality of military expertise for the political decider. Renewing the idea that by strategy one can also understand the dialectics of the confronting wills (Baufre), we add that this is a definition which has the advantage to leave a very large space of action to the strategic domain, which is always presented as architecture with variable geometry.

The expert does not mediate, but transposes, applies or transforms politics into action plans, based on resources, the forces available and by the laws of action, respectively by the laws of military engagement, that means by the laws of war, whereas strategy is a way of projecting and building the action, based on the fixed aims and objectives, by forces, means, principles and resources.

Hence, the domain of military strategy which is also the domain of strategic expertise – even if we restrict military strategy to the military domain⁷ – has an architecture situated dynamically somewhere between the rigor of principles and the flexibility and unpredictability of action.

⁵ **Eugen BĂDĂLAN, Valentin ARSENIE, Gheorghe VĂDUVA**, *Eseu despre arta strategică*, Editura Militară, București, 2005, pp. 14-15.

⁶ **Gheorghe VĂDUVA**, *Consonanțe și rezonanțe strategice în condiții de normalitate, de criză și de risc militar extrem*, Impact Strategic, nr. 1/2009, p.39.

⁷ *Such an acception is debatable, because the military domain is not a reality in itself, but part of the building of each state, of the national and international environment. In all types of society, the military domain is integrated in the political and social one. In many countries, the political leader endeavors to keep the militaries as far as possible from political parties, but the military institution is an instrument of politics, more exactly one of its components. All world armies are controlled, one way or another, by the political leader of the state, because the political leader creates and uses them.*

In today's society which is one of an information type, and which is about to become a knowledge-based one (an epistemological society⁸), strategy comes very close to politics. In such a society it is hard to make a distinction between the political and strategic component of an action to be made. But such a difference is necessary and has to be made, because the political has the tendency to diminish the role of strategy, assuming functions it cannot fulfill, because it does not have the necessary competence. This way, for example, when the political makes the decision of starting the war, the necessity of strategic modeling not only of the war, but also of the deciding political process, appears in all its complexity.

According to a study by Julien Duval, politics represents the art or science which deals with the problems of power, of fighting for power, and of oriented or omni-directional exertion of power (of the power of the political state). Power means, firstly, resources, and also precise rules and mechanisms to transform resources into capacities, which cannot be realized only by political means, but especially by strategic ones.

Therefore, power means enforcement, resources, organization and modeling, i.e., strategy.

War is a construction on a solid or fluid political foundation, perverse or firm, clean or dirty. In its analysis the real coordinates which define and stake out war (flexible and changing) from the foundation and up to the roof have to be taken into account, otherwise unrealistic, wrong conclusions could be reached.

“The real domain for an army is war – wrote Helmuth Von Moltke (1800-1891). But the development of the conditions for such an activity, the abilities it has, its continuity belong to peacetime”⁹, when there is more time for strategic expertise than during times of war.

In his essay on strategy, he specifies that politics uses war to reach its aim; it has a decisive influence on the beginning and ending of war, but exerts this function also in the course of operations. The expert counts on strategy and therefore works in the interest, and for the advantage of, politics, having it all the time as a basis or spring. He takes shape after the political objective, knowing that as for the action way, strategy stays completely independent.

The expert uses strategy to prepare the fighting means, armaments, resources, and firstly the armies, as a whole. That is why the first thing he had in mind is the deployment of the armies, where he takes the most diversified political, geographical and national considerations into account. Any mistake in the initial concentration of the armies is very hard to be corrected during the campaign. That is why these operations have to be studied by military experts before the campaign itself, when the preparation for war of the troops, the organization of transports, communication, etc. is made.

The way in which the prepared combat means are used belongs to strategy, but the will of using these means in the envisaged operations comes at clash with the opponent's

⁸ *An epistemological society is dominated by scientific knowledge, every citizen participating effectively in the process of scientific cognition.*

⁹ **Eugen BĂDĂLAN, Valentin ARSENIE, Gheorghe VĂDUVA, Eseu despre arta strategică**, Editura Militară, București, 2005, p.405.

will. The expert knows that the opponent's will can be limited and tread down by means of tactics, if we have or get the strategic initiative. He also has to take into account that such a confrontation has all the time material and moral consequences of utmost importance, that the encounter with the enemy creates at the same time different situations, which require different measures. There is no operation plan which can be deployed with certainty the way it was conceived, from the first action to the last confrontation with the enemy forces. But an operation without an operation plan is not possible.

The only permanent element of this plan is the established objective. The expert always has this unchanged objective in front of him. As for the rest, everything is changing. No expert can precisely determine the necessary means for war, from the first to the last day of operations.

In order to clarify the relationship politics-strategy and politics-war, the debates go simultaneously on the theoretical, philosophic and pragmatic levels. The experience accumulated by the expert has a say, but the great scientific achievements and those of the philosophic reflections find a very useful correspondence on the plan of military reflection in a natural way. The time of Napoleon and Clausewitz, the same as our time, is one of strong connections strategy-politics, science-strategy, and war-strategy.

The expert is armed with this strong resolve, which facilitates his reflection and facilitates his intercession. He knows, it is vital for him to know, what he has to obtain by war, and he knows how to do it, but the concrete choice of the operation theatre and of the war theatre, the positioning of the forces, the establishment of the operation lines and of the other elements on which the efficiency of the tactical action depends are variables hard to correlate, and which are submitted to the conditional probability law. From here it does not result that he is in front of a fog cloud, of a cloud of uncertainties or quicksands, but only the strategic difficulty.

A good expert will never fear such challenges, because this is his job, his quality as a professional, a strategist. This aspect is essential in strategy; the more the strategy is called upon to put into operation an often changing political decision, an unclear or even perverse one.

The decisions an expert makes have only few solid bases which apply a more or less firm thinking or justifiable from a political or military point of view, of the international or moral right. Beyond these basic issues, there is sometimes an immense sea of uncertainties and immense responsibilities. That is why a part of his selections cannot be anticipated. They rely on new information, on the evolution of the situation and on the expert's capacity to understand the issues at stake and make wise decisions.

In **figure 2** [¹⁰], the identification and evaluation stages of the risks corresponding to the Risk Management Strategy are presented schematically.

¹⁰ Dr. ing. **Ilie GHEORGHE**, *De la management la guvernare prin risc*, Editura UTI Press, Editura Detectiv, București, 2009, p. 291

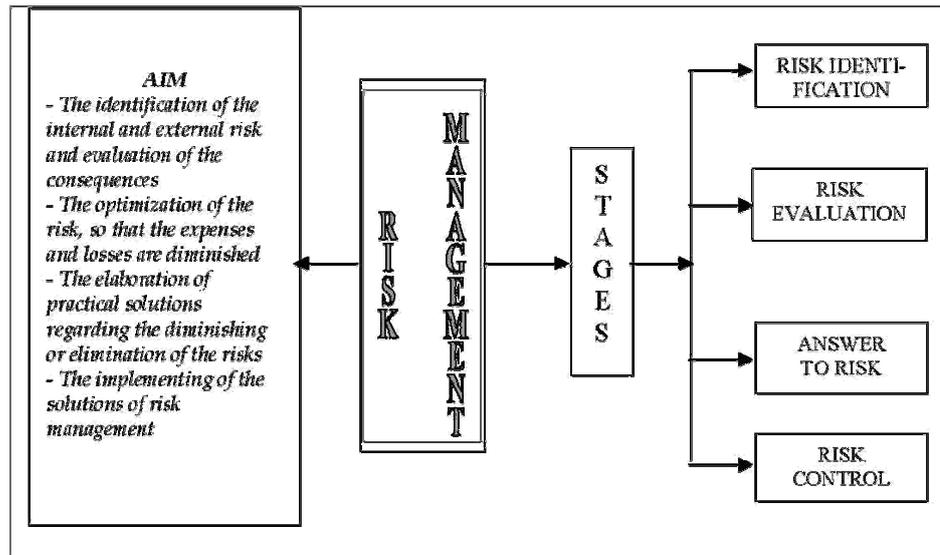


Figure 2. The risk management strategy

Because the successive actions of war are not deliberate executions, but spontaneous acts which meet the requirements of the moment, the expert has to make realistic analyses and syntheses, to project variants and solution proposals, tendencies and especially consequences with ingenuity and founded on calculations, graphics and comparisons which must reflect the realities and dynamics of the civilian and military structures, in the context of Romania's membership to NATO and the EU. The strategic expertise of the political decision has consequences upon:

- The resource needs:
 - Human resource;
 - Economic – Financial resource;
 - Technical – Technological resource;
 - Material resource;
 - Information resource;
 - Time resource
- adopting the programmatic documents (the Security Strategy; the White Charter; the Defense Strategy; doctrines)
- Organization;
- Procurement of the Armed Forces;
- Training
- Resource management (human; financial; information; material; time).

All of them are part of a specific general conduct, in a style, so to speak, they have a meaning and significance. Each emerging problem requires an expertise to match. No problem is identical to another, but no one can solve math problems, for example, if he or she does not know math.

This axiom is true for the military art, too. No matter how talented a military expert is, but he cannot solve a concrete problem if he does not know, understand or apply the science of war, if he does not make, sometimes at very short notice, thousands of connections between what he knows, what he learned, what he experienced and what is currently happening. An expert is not an expert if he does not know or see all the phenomena, processes and events necessary to pass the exam that he takes in front of victory or disaster.

An expert must see in uncertainties: he has to see through fog, often to guess and relate the unknowns, to keep balance and awareness, not to roam in the immensity of details, impressions, feelings, or situations. During the training for war, an expert is not his own master. He needs impeccable logic, fast analysis, lucidity, the ability to see beyond what people see, grasp, courage to take responsibility and accountability of courage. But above all, an expert means will, courage and wisdom. If strategy is the dialectic of facing wills, this has nothing to do with voluntarism, stubbornness or pleasure. This is neither strategy, nor military policy.

Many times, these things go beyond the analysis, but they should not go beyond the expert. When considering a military confrontation, they take into account, as a rule, the balance of forces, quantitatively and qualitatively, the positioning of armies, the fire system, the undertaken maneuvers, in other words, the performance of this operation. But, as Exupéry said, the important things remain often invisible, but not for the expert, we add.

The same applies in the case of military art, and also of strategy. A genuine expert is not interested in the performance battle, but in achieving the purpose of war. If such a goal can be achieved without struggle, without casualties, so much the better. If not, the expert will prepare a study for these losses to be as small as possible. That was also done for the two confrontations / armed conflict in the Persian Gulf in 1991 and 2003, and the losses were incredibly small, unlike in the present conflict in Iraq where the current losses are too numerous, which means that the strategy is not appropriate and another one has to be chosen.

Beyond this game, this clash of wills, life offers plenty of other variables - difficult to predict accurately, but they must be taken into account. In the multitude of factors, some of them known, others unknown, there is a third category of factors, which sometimes completely overlooked in the forecast: temperature, illnesses, accidents of all kinds, namely chance, fatality, force majeure.

The assessment a general makes depends on all these factors, i.e., by calculating the probabilities of which we should not exclude, no matter what. Such a calculation seems cumbersome and even inefficient, but the expert must be able to change the political decision in a victorious military action.

Military strategy is a military component of the human life, a complex way of thinking, planning, organizing and acting in case of a war or military conflict, in managing a crisis or a military conflict situation.

Military strategy is, in essence, the science and art, the skill, the ability, the experience, and the way to implement, by military means, a political decision by high-profile projects within a complex and conflict international security environment with many challenges, contempt, dangers, threats and vulnerabilities, which require a philosophy of identifying, calculating and assuming risk (internal and external), to develop, on this basis, a national policy of alliance or coalition of the most proper behavior and the appropriate expertise of the political decision.

Military strategy was understood in the past as the great commanders' ability to defeat the enemy, both in war and in preparation for war, using intelligently the forces, means and allocated resources by the political factor and also to prepare the necessary conditions for victory in a battle or a war, to realize the goals and objectives set by the policy-makers. It depends on the experience, skill and art of the General Staff, of the military commander, of the general to design, plan, organize, relate, operate and update, in a realistic, intelligent and brave manner, the systems and active processes, and the methodologies which create the best conditions to put into operation the political decision, optimize the synergy of the strategies of national security and alliance (coalition).

Military strategy requires, therefore, the existence of at least four major issues to be joined in structural systems and processes in support of high-risk or even extreme risk, in the context of complex determinations, with unforeseeable developments: a political decision; a conflict strategic environment; a strategic concept of forces, means, actions and resources; a support of legal and legitimate employment. All of these are mutually interdependent, not being able to exist one without the other in sizing and resizing the strategic action.

The interrelations of the four components are represented in **Figure 3**.

The conditionings are very flexible, so that the ability to act at any level of risk and of reaction-response, at any level of challenges, contempt, dangers and threats, to be able to be adapted appropriately to the situation demands.

As you know, military strategy is both a strategy of action and reaction in limited situations, i.e. in conditions of extreme risk, and *a strategy of implementing in action a political decision for any conflict situation*, from those which are related to solving the crisis by military means, to the ones meant to help the population in emergency civil or military situations and natural disasters.

Of course, military strategy must meet an extremely important request, without which no other action or reaction can be possible. We refer to the force generation of and means necessary for actions (preventive, preemptive, of reaction or response), which are complex, variable, planned and, depending on concrete situations, modeling and adaptive to them, meaning surprising and very unexpected, being of a very wide range in the conditions of some complex situations, from minor actions to ones of extreme risk and war.

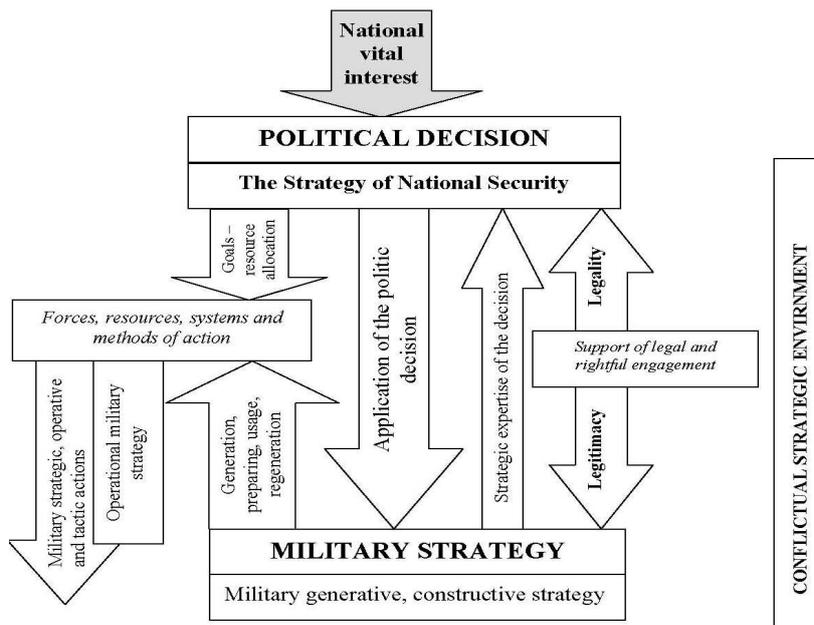


Figure 3: Political and military strategic, decisional and active consonant and resonant

Generating the forces, means and actions is not an easy task and well established in policies and immutable strategies. The forces, means and necessary resources to the military action are of special order, with a special philosophy, usually inaccessible to common sense or understanding. They will be always situated between moving milestones, somehow, always the same and yet different, between complicated paradoxes and specific and time-consuming constructions. The expert explains why all these are needed, why the army needs many resources, why it must be given these resources, in a world where armed violence is and will always be condemned, outlawed, rejected and unacceptable.

An army always prepares for war for decades, even centuries, because no state, big or small, strong or weak, can afford to neglect preparation in order to face the serious or extreme risk, like the war. The statements, the policies to harmonize the interests of the world, the numerous international agreements could not prevent or limit (moderate) the research on weapons, advanced weapon systems, nuclear weapons, weapons based on waves, lasers, nanotechnologies, and on other modern technologies, some of them still unknown even to the evolved scientific world. The humanity does not give up its guns, and those submitted to non-proliferation treaties or reduction treaties are usually outrun or cannot be very well controlled. As noted, the world is, in essence, about conflict and the

dynamic essence of the world is not represented by values, but by interests. The dynamics, i.e., movement and conflict, is based on interests, not on values. There is political, social, information and military conflict. Conflicts are the interests, goals and objectives, active projections as the source of actions related to the access to the natural and energy resources of the world, from high technologies to financial resources, markets, infrastructures, etc.

The policies, strategies (including the military) and actions do not operate only in the area of interests, but also in the sphere of values, through their scientific and artistic components. Therefore, when we talk about the military action levels, the expert has in mind not only the interests that generate the action, but also the valuable, structural and organizational support of the action. Of course, the action consists of a system of activities and events that follow a goal fulfilled through the achievement of objectives. But the action has as main driving engine interest, beyond which there is the support of wisdom, a system of values which relates to each result, product and effect.

Military strategy is, in this context, not only the science, experience, approach and art to make a political decision, but also the science, experience, skill, ability, art and approach to harmonize the foreseeable effect of an action or a complex of actions with its axiological military and civilian-military coordinates¹¹. This means military strategy puts in relation the supports, mobiles and predictable levels of the military action in a construct with variable geometry and capacity to adapt to the expected, planned or only suspected but possible changes, in a context of values of legality and legitimacy. The strategic level can provide strategic expertise to the political level on strategic consonant or dissonant coordinates, or just signals the possible dialectic consonants or dissonances¹². This is of great importance, insofar as it draws the policy makers' attention on the responsibilities they must assume and better shapes the risk level of the action in the operational and tactical plan. A relationship of these levels is presented schematically by Gheorghe Vaduva (Figure 4)¹³.

The forces, means and resources are used for military actions and military response and in other situations that the policy maker considers to be resolved by such means, in the legal, legitimate and compliance conditions to the principles and rules set by the international law.

¹¹ **Gheorghe VADUVA**, *Consonanțe și rezonanțe strategice în condiții de normalitate, de criză și de risc militar extrem*, Impact Strategic, nr.1/2009, p.43

¹² *Ibidem*

¹³ *Ibidem*, p.42

INTERRELATIONS			
LEVEL	Interest (mobile of action)	Axiological support (of connection)	Effect of interrelation (expected, planned, developed)
Political	<ul style="list-style-type: none"> ➤ Substantiation of the military policy component (security and defense) of the military field (architecture, construction, military transformation); ➤ Allocated resources; ➤ The purpose of the intervention (military action); ➤ The limits and political configuration of the employment. 	<ul style="list-style-type: none"> ➤ The values systems of the conflicting parties; ➤ The intersection sphere of the multiple elements contained by the political decision on base of security and defense and values that define the real and lasting support of security and defense; ➤ The way in which the political decision affects the value systems. 	<ul style="list-style-type: none"> ➤ The strategic expertise offered by the strategic level (and accepted by the political level), based on the strategic analysis of interrelations and expressed in the quality and realism of the arguments that support or weights (shape) the political decision; ➤ The development of experience in the plan of security and defense; ➤ The assimilation of results that can enrich the political and military patrimony of values related to the security and defense.
Strategic	<ul style="list-style-type: none"> ➤ The strategic scope and objective; ➤ The strategic level of engagement, depending on the allocated resources and limits established by the policymaker; ➤ The strategic maneuver. 	<ul style="list-style-type: none"> ➤ The strategic culture; ➤ The war experience recorded in valuable works, in monuments, museums, but also in the collective conscience of the nation and the army; ➤ The organizational culture; ➤ The respect for the military institution; ➤ The quality of the strategic command; ➤ Trust in the military and commanders etc. 	<ul style="list-style-type: none"> ➤ The ability to combine the interest with the axiological coordinates, to develop a support of strategic expertise for the policy-maker and a support of strategic culture for a strategic realistic and complete decision that will be broadcast to the operational level; ➤ The development of the strategic culture necessary to the strategic Command the commander of strategic level and headquarters.

Figure 4: Political and Strategic Interrelations

The must obey timely the national or international strategic command, alliance or coalition, within the boundaries stipulated in the Constitution and organic laws.

The parliament and government must take steps to defend the sovereignty over its territory with responsibility toward the past, present and future of the country because there is an express, vital requirement, to preserve the national identity, security and defense of its borders and those of allies and partners. But nowadays the borders of a country are not secured and defended by focusing the units on borders and developing a hostile philosophy of the borders, by separation and opposition, because the days of such borders have long passed. Today, the borders of countries that are part of the European Union separate, identify and join the countries of the Union.

It is necessary to be respectful of the borders, their security, the counter challenges, contempt, dangers and threats, by giving them targets and reduce their vulnerability. Moreover, each country's security depends on the security of the others, the conflict control and management, inclusive by military means, because, in the new conditions, when there are thousands of active nuclear heads in the world, performing weapon systems, cross-border networks of C.O., of terrorists and mafia, each state must become responsible for managing the conflict, the resolution, inclusive by military means, of crisis and conflicts. The moral dimension of the military strategy act has developed and transformed a lot; today it is moral to participate in the military and civilian-military effort of collective conflict control, crisis management and armed conflict, not to miss it. It is immoral to stand aside on the reason that you are not threatened by anyone at the border, and wait for others to resolve the crises and conflicts that take place outside the national borders.

One of the objectives of scientific research is the development of inferences by which we come to know the phenomena to which we do not have direct access, using the available data. The phenomena and processes that we do not know directly concern the researchers who elaborate theories and assumptions; the phenomena that we know provide data (quantitative and qualitative) on which research is based. There is descriptive inference and causal inference. The former formulates propositions about phenomena that have not been directly observed on the basis of some individual observations. Noticing the behavior of a sample, the description of the behavior of the entire population is estimated and tried. The causal inference tries to explain the variation of a phenomenon or social fact by the variation of another phenomenon or social fact, using models and methods for research on correlations. It starts from the idea the phenomena and processes are the result of a large number of factors, some of them essential, others insignificant, some measurable and others immeasurable. The combined action of nonessential factors can substantially influence the development of the process under analysis by relations of a statistical type, described by statistical laws. The production of causal inferences and their inclusion in the theory is the objective of the scientific research.

Military Sciences, as social sciences, cover a wide range of activities and social fields with military specificity: the military action; war; the action of the armed forces for peace and social stability; the influence of the geographic space on the military policy and the military phenomenon; combat means used in the military action, etc. The methodology of scientific research in the military sciences has to combine methods, techniques and tools for each objective of the study.

In his research, the expert in military sciences should observe the following principles:

1. principle of unity between theoretical and empirical data
2. principle of unity between understanding (comprehension) and explanation
3. principle of unity between quantity and quality
4. principle of unity between ascertaining and evaluative judgments.

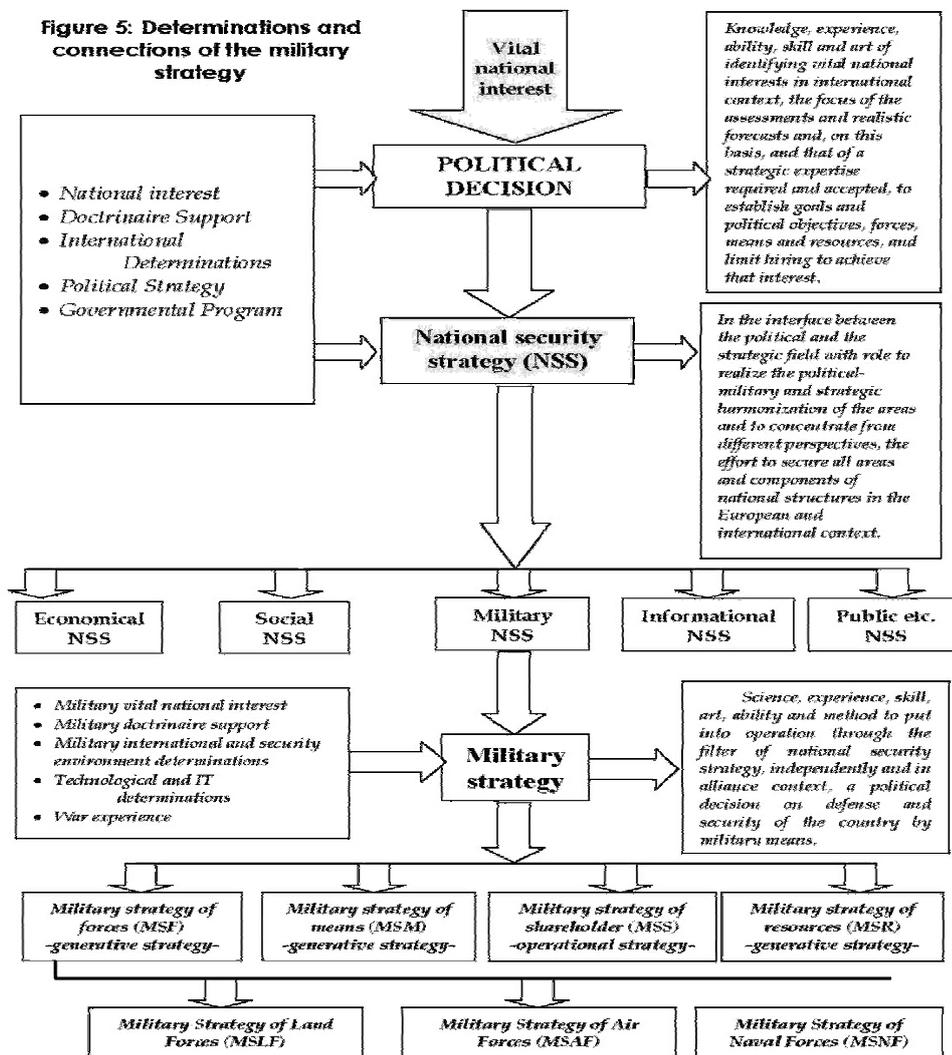


Figure no. 6 shows in a table form a comparison between the qualitative and quantitative research adapted by the military expert.

DIMENSIONS	RESEARCH TYPE	
	QUANTITATIVE	QUALITATIVE
1. General guidance	Positivist-explanatory	Phenomenological, comprehensive
2. The dimension of the researched reality	Mostly global, formal	Micro-social, local, contextual
3. The relationship between the researcher and subject	The researcher looks from outside	The researcher is inside or at a close distance
4. The relationship between theory and empirical research	Verification of theory by empirical research	Of emergence of the theory, during research
5. Time of data collecting	Short, episodic period	Long and continue period
6. Main methods	The experiment, investigation (questionnaire), systemic observation from outside	Participative observation, comprehensive interview, analysis of the documents
7. The style of the research report	Figures, tables, charts, reviews of results	Eclectic language, with little statistical data and charts

Figure no. 6^[14] Comparison between the approaches (research) of qualitative and quantitative type

The research methodology in the military sciences is an analysis of methods and techniques applied by an expert in creating and completing such research¹⁵. The expert uses the methodology as expression of the critical and constructive consciousness in order to create the appropriate investigative strategies formulated on basis of reflection on past research experiences, indicating the ways of obtaining a legally valid strategy from the scientific point of view. The strategic research methodology, as a science about method, is identified with a logical scientific analysis of social reality based on *a priori* theoretical assumptions.

¹⁴ PETRUȚ, Florin, *Sociologie. Note de curs*, Biblioteca virtuala a Academiei Fortelor Terestre "Nicolae Balcescu", Sibiu, f.a., <http://www.armyacademy.ro/bibliotecacursurisociologie/petrutindex.html>

¹⁵ VLASCEANU, Lazar, *Metodologia cercetarii*, in "Dictionar de sociologie", coord.: Catalin Zamfir si Lazar Vlasceanu, Editura Babel, București, 1998, pp.349-351

In terms of analysis methods and techniques in the military sciences, they are not different from the specific social sciences in general.

The method is the way of research, the system of rules and principles to know the social reality, existing quantitative methods, qualitative methods, the statistical method, the inductive or deductive method, etc. These methods can be classified according to three criteria¹⁶:

✓by the *temporal* criterion, there are transverse methods (investigation, survey, psychological and socio-metric tests, etc.) and longitudinal methods (case study, biographical analysis, panel study, etc.).

✓by the *type of investigative approach* there three methods are known: quantitative methods, qualitative methods and methods of intersection;

✓by the place occupied in the investigative process the following methods are known: methods of data collecting (survey, experiment, observation, etc.); data processing methods (statistical-mathematical, comprehensive analysis methods); methods of data interpretation (inductive, deductive, comparative, causal explanation).

The research technique is the manner of using various tools of investigation. With their help the data are collected or processed, and an instrument is the materialization of the stated methods.

In the research of the military field, the most widely known and broadcast method is **investigation**, which appears and develops closely related to the evolution of social and humanities sciences.

A very important method in the military field research is **observation**, which represents a concrete field, empirical, research, but in the limited sense it is a scientific method of collecting data by the senses, in order to achieve some military, sociological and psychological inferences, to verify the hypotheses or to describe the systematic and objective environment, people and interpersonal relationships, individual and collective behaviors, actions and activities, physical objects, the products of creative activities¹⁷.

In the military field research, the **experiment** is another important method offering qualitative and quantitative data on the effects of independent variables on dependent variables in a controlled situation, with the purpose of verifying the causal hypotheses.

The scientific research methods and techniques of the military field are drawn from the wider context of socio-human sciences. However, the military sciences have their own specificity which is also reflected in the methodologies, methods and analysis techniques, such as, for example, **the application and the game of war**.

¹⁶ PETRUȚ, Florin, *Sociologie. Note de curs*, Biblioteca virtuala a Academiei Fortelor Terestre "Nicolae Bălcescu", Sibiu, f.a., <http://www.armyacademy.ro/biblioteca/cursurisociologie/petrutindex.html>

¹⁷ CHELCEA, Septimiu, *Metoda observației*, in Septimiu Chelcea, Ioan Marginean, Ion Cauc op.cit., 1998, p.409

THE GENERAL STAFF – Architect of the Romanian Armed Forces Transformation –

Admiral Gheorghe MARIN, PhD*

After the disappearance of the bipolar world, the direct threats to the security of the European states have diminished, which has led to dealing with the threats as close to their outbreak as possible. This state of the play has led to an increased number of missions in which the forces of the European states have been deployed in areas of conflict in the Middle East, Asia, Africa, as well as in the Western Balkans.

The author points out that, until the last decade of the 20th century, the traditional threats mainly consisted in territorial disagreements, ethnic and cultural disputes or competitions for gaining access to resources, while today, besides the fact that these threats have not lost their relevance, other types of threats have emerged, such as: terrorism, proliferation of weapons of mass destruction, emergence of non-state actors or asymmetric threats, violation of the human rights and failing states.

Keywords: interoperability; war training; responsibility and competence; forces command; transformation process

If we carry out a retrospective analysis of the Romanian military body evolution, the role played by the General Staff as the architect of the Romanian Armed Forces transformation, no matter the period in history it may be related to, is obvious. The General Staff's capacity to draw up concepts and the act of command permanently exercised by it have caused the evolution and progress of the armed forces, the outcome being the current modern military institution. The General Staff has been the "brains" of all the decisions that have had a major impact on the armed forces and, implicitly, on the military policy of the country.

These days, when the General Staff celebrates 150 years of existence, we take the opportunity to recall the past and to highlight the distinct moments in its evolution. Thus, on 12 November 1859, the ruler Alexandru Ioan Cuza signed the order through which the General Staff Corps of the United Principalities Army was

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set up. Its primordial role in the act of commanding the military institution was stated since the very beginning. Therefore, the General Staff Corps was involved, together with the Ministry of War, in the Romanian Army modernisation process, and, when circumstances imposed it, it was able to participate in the first military confrontation modern Romania got engaged in.

The Romanian Army victory in the War of Independence proved the ability of the Romanian Army, through the General Headquarters, to conceive and command military actions at war. Later on, after 1882, the year when we speak of the Great General Staff, its structure and responsibilities in preparing for, and waging, war would increase so that during the Balkan Wars (especially in the Second Balkan War) it played an essential role in preparing and commanding the operations.

In the years that followed, the Great General Staff focused on the shortcomings identified during campaigns and it was able to improve the command of the Romanian Armed Forces' military operations during the First World War, thus contributing to the creation of the Romanian unitary state.

The participation in the First World War, the outcomes of the Paris Peace Conference and the new physiognomy of the European continent, including the map of the reunified Romania, brought about essential changes in approaching the issue of the national territory defence.

In these circumstances, the Great General Staff was the promoter of a new concept for defending the country, which was to be based on bi/multilateral military agreements and treaties concluded at regional level, to be activated in the event the external threats to the new European configuration, and implicitly to our country, were amplified.

This concept was put into practice by specific organisational structures as well as by the adoption of new doctrinal principles, combat manuals and regulations, specific to that period of time. Thus, the Great General Staff directly contributed to the process of drawing up the law necessary for the organisation and operation of the Romanian military body at that time, proving once more its analysis and conception abilities at strategic level.

In this context, the *Law regarding the organisation of the Armed Forces* in 1930 stipulated that the command of the Armed Forces was exercised by the Minister of War, through the Great General Staff and the general inspectors. The Great General Staff had the responsibility of preparing the war waging, military education and training. Military planners in the Great General Staff conducted military-political studies, as well as strategic and operational ones, which contributed to the reorganisation of the armed forces in 1936. The Chief of the Great General Staff at that time was a member of the recently established Steering Committee for the Country Defence that consisted of the president of the Council of Ministers and some other ministers. In 1937, the Chief of the Great General Staff became a member of the Ministerial Delegation for Procurement.

Because of the unfavourable political circumstances, the provisions of the regional military agreements could not come into force, which influenced the

European and regional configuration at the beginning of the '40s in a negative manner. The strategic plans drawn up at that time for allocating forces on the three "battle fronts" the national territory was divided into confirmed the fact that the Armed Forces transformation had been well grounded and that the Great General Staff was demonstrating its sense of responsibility and competency in meeting the functional commitments. However, their application was annulled by political decisions that were rather controversial.

The Second World War was the landmark event of the Romanian modern military history. The developed studies, analyses and plans and, last but not least, the manner of conceiving and leading military actions during the war highlighted, on the one hand, the quality and professionalism of the staff officers and, on the other hand, the shortcomings in the equipment for a *blitzkrieg* and not for a trench warfare as the previous conflagration had been.

After the Second World War, under the political regime that followed, the Great General Staff went through one of the most difficult periods in its existence, marked by the political interference in the functioning of the military body, as well as by ideological constraints. Nevertheless, the Great General Staff managed to maintain the national identity of the military institution, to enhance the combat capacity of the armed forces and to ensure the national defence capability to meet the political-strategic requirements.

The *Cold War* period, when Romania was part of the Warsaw Pact Organisation, was initially characterised by the adoption of the rules and principles imposed by the leader of this organisation, the Soviet Union, as far as concepts, organisation and actions were concerned.

In the aftermath of the 1968 events in Czechoslovakia, Romania became more and more independent within the Warsaw Pact Organisation, a fact especially materialised through organisational measures with a special impact on the activity of the Great General Staff.

This way, the development of a national defence doctrine, based exclusively on own effort, was taken into account. In this context, the concept of the *entire people's war* was developed. The foundations of the national defence industry were laid, and the Patriotic Guards were set up, as the main support for the above-mentioned concept, as well as a series of units and large units, especially mechanised and armoured vehicles ones.

During the communist regime, the Great General Staff ensured, through special efforts, the continuity of the Armed Forces transformation, their procurement, the training of commands and troops, as well as the military education modernisation, so that they could meet the requirements of the strategic environment at that time.

While the universal military art was enriched with new principles and rules, mainly determined by the revolution in military affairs and by the more and more sophisticated conflict physiognomy, the Great General Staff had to act like a living

body, connected to the realities of the time and created on the modern scientific bases.

In these circumstances, the military thinking promoted by the Great General Staff had to take into account the developments of the security environment, which changed the continental and global architecture for good.

The 1989 revolution re-asserted the tight link between the armed forces and the people and opened the way towards profound democratic transformations within the Romanian society and implicitly within the military institution. The transition to a democratic society imposed a clear definition of the role and responsibilities of the structures meant to ensure national security and defence, all being sanctioned in the Constitution adopted in 1991.

The end of the *Cold War* and the new trends in approaching the concept of *defence*, in the context of the lack of security guarantees at the beginning of the 90s, resulted in the fact that the military body, in general, and especially the Great General Staff, whose name was changed into the General Staff, had to cope with extremely complex problems, some of them completely new. Thus, the new strategic profile of our country depended, to a great extent, on the solutions provided to those particular problems.

The major global changes, the new relations between states, the new dialogue between the East and the West facilitated a new approach to the concepts of *defence and security*.

Romania's political option to join the European and Euro-Atlantic bodies outlined a new vision regarding the Romanian society modernisation strategy, in its attempt to assert itself in the great European family and to adopt the universal values, the democratic principles and those of market economy, as well as to observe human rights.

Being certain its national interests can be promoted, asserted and pursued only within the Euro-Atlantic security structures, Romania considered that NATO membership was the best solution in order to ensure viable security guarantees.

By the initiation of cooperation projects and programmes, the EU and NATO member countries facilitated the acceleration of the transition process towards democracy and market economy as well as that of the accession process development for the countries in Central and South Eastern Europe, Romania included.

In this context, as an institution with a key role in providing security for the Euro-Atlantic area, NATO offered to candidate and partner countries the possibility to understand the Alliance's philosophy, the essence of interoperability, to know the command and control system, the organisation, information, standardisation and logistics, as well as the details of the defence planning, assessment and decision-making processes specific to NATO.

This framework ensured the support for the development of a unitary and coherent transformation and modernisation strategy for the Romanian military institution, in order to meet the specific NATO standards. Thus, the Armed Forces restructuring and modernisation process, led by the General Staff, was developed

simultaneously with the political and diplomatic actions conducted so that Romania could become a NATO member country, and the process of modelling the future structure of the Romanian Armed Forces has undergone conceptual and actional clarifications.

A priority of this process was the adoption of the main laws and norms, which would ensure the optimal functioning of the military body in the circumstances of the rule of law and market economy.

From a historical perspective, the General Staff was constantly aware of Romania's real defence needs, in accordance with the concrete realities, priorities and national possibilities, and the security context of the '90s, accomplishing its tasks with abnegation and in a professional manner.

The Necessity for the Romanian Armed Forces Transformation

As a result of the security environment profound change and the considerable decrease in the possibility of a major military attack against Romania, the mission types and content have been adjusted, focusing on providing the necessary capabilities to carry out new missions by taking into account the rapid deployment of the forces and their self-sustainment in the theatres of operations.

Taking into consideration the above conditions, the General Staff had to develop new strategies regarding the organisation and use of the armed forces concomitantly with setting up effective technical response capabilities. Based on the threats, challenges and vulnerabilities to the security environment and on the political-military evolutions at regional and global level, the goals and missions have been established, and the structure and size of the Romanian Armed Forces have been correlated with the allocated resources.

At the same time with the dissolution of the bipolar world, the direct threats to the European states' security have diminished and moved closer and closer to their breeding ground. This situation has resulted in an increase in the European states' missions carried out in conflict areas in the Middle East, Asia, Africa and the Western Balkans. If by the end of the 20th century the traditional threats were mainly regional conflicts, ethnical and cultural disputes or struggles for access to resources, at present, besides the fact that these threats have not lost their relevance, other new types of threats have emerged, such as: terrorism, proliferation of weapons of mass destruction, non-state actors' actions or asymmetric threats, human rights violation and failed states. The ability to influence the aspects related to international security by military force represents an essential factor and the need to respond to the current crisis situations stands for many and complex reasons leading to modern armed forces transformation.

The identification of terrorism, together with organised crime and proliferation of weapons of mass destruction, as main threats to security, have required a change in the physiognomy of war, by increasing the share of military non-classical actions as compared to the conventional ones.

These modifications are directly reflected in the current crisis management operations in which Romania participates either as a member of international organisations (i.e., the UN, NATO or the EU) or within coalitions. Thus, the current operations have an expeditionary character, totally different from the *Cold War* period when a static approach prevailed, focused on territorial defence. The main characteristics of the current operations are: force deployment in the theatre should be at short notice; the objectives are restricted, often limited by constraints; frequently, crisis management operations are long-term missions; the great interoperability is related to the need for the participating forces to be able to operate jointly; the necessity to set up a rapid response force package; the force deployment during operations should be sustainable for a long period of time, according to the assumed commitments; the forces should be trained and equipped accordingly to cope with the full spectrum of missions.

As a result, during the last decade, at the level of the Euro-Atlantic bodies and member states, essential changes have occurred regarding doctrines, training procedures, and forces and organisational structures, new types of equipment and assets being purchased. At the same time, steps were initiated aiming at increasing the usability of forces in operations. Moreover, we can assess that during the last decade, military operations have dethroned the superiority of the technical factor/component, hence underlining the importance of a complex of factors, out of which the most important ones are *interoperability* and *training*.

The Romanian Armed Forces have had to face these challenges and this meant the initiation of an ample transformation process in which the General Staff played and is still playing the leading role.

The accession to NATO initially required the beginning of a restructuring and reform process to cover the entire military body, an ample and complex one, that was conceived, planned and coordinated, as expected, by the General Staff. After accession, Romania's Armed Forces transformation has been planned and carried out as part of the NATO transformation process in order to achieve a modern force structure, downsized, professionalised, adequately equipped, deployable, interoperable, having self-sustainment and multi-dimension protection capacity.

The Romanian Armed Forces transformation process has been associated with the North-Atlantic Alliance transformation where NATO requirements for personnel staffing, the high costs to sustain the troops in the theatre, the significant differences between the military equipment technology of the advanced state members of the Alliance and the equipment of the Romanian Armed Forces are the prerequisites for the transformation process.

In this respect, the General Staff stands for the driving engine of this process and plays an essential role in the transformation of the armed forces from a massive, heavy, oversized structure, having only territorial responsibilities, into a modern, well-equipped and trained military body, able to participate in providing the national territory integrity and security, and to carry out operations on the national territory,

within the NATO area of responsibility, as well as in an extended strategic environment permanently influenced by factors that require change.

The Romanian Armed Forces Transformation Strategy

In order to have unitary coordination and achieve the transformation goals, the General Staff has developed *the Romanian Armed Forces Transformation Strategy*, a document that represents the medium and long-term vision on the Romanian Armed Forces size, training and equipment to participate in future operations. According to this strategy, having 2005-2006 as the starting point, and up to 2025, the Romanian Armed Forces transformation process has been carried out and will continue its development in three distinct stages, determined by the forces reorganisation and the deadlines to accomplish the *Force Goals*, and NATO and EU integration requirements.

The Romanian Armed Forces Transformation Strategy, through its stated purpose, sets objectives not only in the force structure field but also at the level of the other central structures of the Ministry of National Defence. To this end, the General Staff has drawn up *the Romanian Armed Forces Transformation Strategy Implementation Plan* that includes goals, timelines and stages, tasks and responsibilities, as well as coordination measures and the necessary resources supply to achieve the transformation goals. The plan also contains details about the structural evolution, the planned financial support and the way to achieve the transformation process synchronisation with NATO transformation process.

Currently, the first stage of the transformation process, the basic restructuring phase, has been completed, the Romanian Armed Forces size matching their new missions and the available resources, a new way to create and conduct forces to take part in stability and support operations being also promoted.

During the current stage that started two years ago, i.e., operational integration into NATO and the EU structures, the main effort will be focused on the continuation of force readiness and of the major acquisition programmes, on the reorganisation of military education, the increase in our contribution to NRF and the EU, as well as on extending the implementation of some interoperability requirements of the *Force Goals* at the level of non-deployable military units. In this context, the concepts development, experimentation and implementation provide a logical basis for organising and relating strategies, doctrines, concepts, processes and procedures necessary to transform the military body, establishing the framework to achieve the capabilities the Romanian Armed Forces need.

We have also focused on the military capabilities planning and development to achieve the operational effect required by the specific standards in a designated environment, in a specified period of time and to maintain the effect for a specific period of time, their efficiency being directly connected to the synergy obtained while combining and using them in a definite environment (interoperability).

Thus, during the capabilities development process, to meet the assumed NATO and the EU commitments, we have taken into account the following domains:

➤ *Implementation of the new Command, Control, Communications, Computers, Information, Computer Technology, Surveillance and Reconnaissance concept.* The programmes under development are as follows: command posts, brigade and division size, an integrated communication and information system to equip the structures made available to NATO, C2 air system to integrate within *NATINADS*, C2 air system within *ACCS (NATO Air Command and Control System)*; C3 systems on Frigate 111 and frigates T22R type, Naval Communication and Information System and the Surveillance and Control System for the Black Sea.

➤ *Intelligence and reconnaissance capabilities at the operational and strategic level*, by implementing *SINCER – Monitoring Integrated System* in short wave frequencies, *GISSINT – Geographical Information System* at strategic level, *SIGINT – Monitoring system for information from electromagnetic sources*, *SIBDRE – Computer Technology System for Electronic Warfare Database*, achieving a *HUMINT* national capability able to provide *HUMINT* teams' deployment in support of national contingents participating in NATO-led operations (*HUMINT* Centre of Excellence has already been set up in this respect, available for NATO member states' personnel to be trained).

➤ *Manoeuvre Capabilities by increased rapid deployable forces*, providing airlift capabilities (by our own C-130 and also as party to C-17- SAC initiative), completing with transport aviation – short/medium carrier – C-27J SPARTAN, as well as by our active involvement in the *European Air Transportation Fleet (EATF)* initiative. At the same time, for the air transportation of our troops to/from the theatres of operations and medical evacuation (MEDEVAC) missions, IAR-330 PUMA helicopters are currently undergoing a modernisation process in compliance with and according to NATO standards. 11 out of 13 helicopters have already passed the initial evaluation phase.

➤ *Effective engagement capabilities* by carrying out several major procurement programs aimed at ensuring the secure participation of some advanced combat individual systems in multinational operations, in urban area, accomplishing air police missions, engaging in complex missions of air defence and support of ground forces deployed, conducting air-to-air, air-to-ground joint operations completed with precisely striking of targets and operating under any meteorological conditions.

We have also focused on achieving survival and self-protection capabilities aimed at providing effects limitation following any enemy attack with conventional arms and CBRN, including the limitation of terrorist attacks against the own forces and infrastructure deployed in a theatre of operations while providing freedom of movement and reactive capacity to our forces.

A military capability planning process both at national level and in NATO and the EU context represents a key function of the strategic planning process that is accomplished based on a specific algorithm including the following elements: identifying the security environment trends and evolutions; getting to know the new trends in military equipment and technologies; establishing a general military level

of ambition; evaluating the current capabilities while identifying possible shortcomings; initiating concrete measures to fix up the identified deficiencies also assuming the creation of new military capabilities, if necessary.

Further on, we will have to identify that weaker element within any particular capability in order to apply corrective actions. This way, we intend to increase both the quality and effectiveness of the achieved capabilities, and we will be able to develop new capabilities with less effort, eliminating the duplication of our actions.

It is rather difficult not only to create a particular capability but also to keep it operational according to definite standards, if we take into account the continuous decrease in the allocated resources. To preserve the NATO certified units' readiness at the level of assumed standards should become a top priority of all the entitled structures actively participating in this quite complex process in which research and development should play a crucial role in achieving at least minimum appropriate capabilities necessary to meet our international commitments. Therefore, throughout the current phase and the next one as well, this activity should be increased by participating in capabilities' development initiatives since their project phase both at national level and within NATO and the EU or with other partners, on bilateral bases.

From this point of view, conducting different activities specific to the capabilities development process will be focused on those elements that fully contribute to the achievement of a particular capability: training, doctrine, organisation/structure, personnel, equipment, force readiness and deployment capacity; financial resources planning to develop the required capabilities while concentrating the efforts on national key domains (distribution of budgetary resources, share common experience and expertise to meet interoperability standards; prioritisation of those domains involving common projects under NATO and the EU coordination).

It is obvious that the General Staff endeavours aimed at coordinating and accelerating the Romanian Armed Forces transformation process will not end in 2025. They will continue permanently, to ensure the Romanian Armed Forces appropriate pace required by the continuous adaptation to the rapidly changing security environment in order to effectively and efficiently respond to the new security threats at regional and global level.



PARAMETERS OF THE EUROPEAN UNION DECISION-MAKING PROCESS ON CRISIS MANAGEMENT

Dragoş ILINCA*

The ESDP is one of several instruments of the Union's common foreign and security policy (CFSP). Nonetheless, the introduction of the ESDP required new institutional bodies, the elaboration of new decision-making procedures, as well as new types of planning processes and methods in order to provide the Union with a real capacity to carry out peace support operations. In many ways the complex decision-making procedures at the EU level display fairly unusual working methods. The formal decision-making on ESDP operations is taken in bodies where all members are represented, all decisions are taken unanimously, and the level of formal delegation to other bodies than the member state forums is minimal. The relative strength of the various institutional bodies also differs considerably compared to most other EU areas.

1. Main aspects of the decision making process in the field of Common Foreign and Security Policy, including the European Security and Defense Policy

The vast majority of views on European institutional architecture converge on the conclusion that the latter is characterized by extreme complexity which generates a quite particular decision-making process in which the procedures are laborious and equally slow. This conclusion is validated in the contemporary context whose parameters, influenced largely by the effects of globalization, require a flexible approach which can facilitate decision making. It is obvious that the "victims" of this situation are multinational structures and, especially, those whose agenda includes a wide range of topics. It is by far the case of European Union which is dealing with a lot of topics, such as the economic dimension, with its extremely complex facets, as well as the newly created security and defense component. In this case, the particularity is enhanced by the fact that the relationship between the Union and the Member States remain "hostage" of the intergovernmental approach. We can talk there even of inertia, in terms of accepting a possible decrease of national attributes in this area, in a similar way with other policies, particularly the economic one. From this perspective, the EU Council can be considered an island in the decision making process which takes place differently and encompasses two basic procedures.

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The first concerns the parameters of decision on matters of strategic relevance, such as: amending the Treaties of the Union, European Union enlargement, drafting the budget, foreign relations, defense and security related issues. In these cases, decision-making within the Council relies totally on the consensus principle.

The second procedure is applicable to the remaining areas that are in the EU Council courtyard, where the decision making process can be conducted by Qualified Majority (QMV-Qualified Majority Voting). Within this system each Member State has a number of votes¹ corresponding to its population (number of voters) and its geographical size, as follows:

- Germany, France, Italy and the UK - 29 votes
- Spain and Poland - 27 votes
- Romania - 14 votes
- Netherlands - 13 votes
- Bulgaria, Czech Republic, Greece, Hungary, Portugal - 12 votes
- Austria, Bulgaria and Sweden - 10 votes
- Denmark, Ireland, Lithuania, Slovakia and Finland - 7 votes
- Cyprus, Estonia, Latvia, Luxembourg and Slovenia - 4 votes
- Malta 3 votes

In order to establish a balanced decision-making to represent, as far as possible, the interests of as many Member States, the adoption of a decision by QMV, the Treaty of Nice sets the threshold for passing a decision is 73.9% out of the total number of Council votes (255/345).

As regards security and defense, they are subjected to the first procedure. From the perspective of overcoming the difficulties arising from the implementation of the consensus, the Treaty of Amsterdam has introduced a new mechanism known as "constructive abstention", maintained by the Lisbon Treaty. The provisions of this instrument allowed that in case one state is not in favor of a decision can support the Union by expressing its choice to abstain. At the same time, the intergovernmental nature of CFSP-ESDP grants to the respective member state a certain degree of freedom in applying this decision. Nevertheless, it should be noted that this type of procedure does not apply in case the abstaining states represent 1/3 of the Council votes.

Also, the EU framework includes an additional tool, namely Enhanced Cooperation², which offers the possibility of establishing enhanced types of cooperation between Member States in developing projects or initiatives related to the foreign and security issues. To avoid initiation of such projects contrary to the general guidelines, the use of this tool can be made only for the implementation of the Joint Actions or Common Position adopted by the Council.

In procedural terms, the TEU stipulates that implementation of such cooperation has to be based on a request to the Council made by the Member States which so wish. Council consent is absolutely necessary to start such an initiative; the decision in this regard should be obtained by QMV. At the same time, there is an obligation that Parliament has to

¹ <http://www.europa.eu/consilium>

² *Official Journal of European Communities, no. C325, 24.12.2002, p. 28-30.*

Parameters of the European Union Decision – Making Process on Crisis Management

be informed regarding the application of this formula. Equally, there are limitations regarding the initiation of these issues, given the fact that the other Member States may ask the initiative to receive approval of the European Council, where the procedure involves consensus. Finally, it should be noted that the application of Enhanced Cooperation formulas is not possible in the military dimension of the European Security and Defense, which is entirely subject to the consensus of the Member States.

Routine decision making is based on the policy guidelines coming from the European Council meetings. The implementation process lies in the EU Council responsibility, which act in this regard through the General Secretariat and sometimes alongside with other EU institutions like the European Commission. At the Council's level, the most important structure is the Political and Security Committee (PSC), a body with major attributes in the exercise of decision making in security and defense issues.

In drawing up documents on security and defense issues, the PSC receives recommendations and advice from the Military Committee, the Committee on the Civil Aspects of Crisis Management, the Commission (if any), legal services and other bodies concerned from the General Secretariat. On this basis, the Political and Security Committee agrees to the document to be submitted to the Permanent Representatives Committee to discuss possible problems for which consensus was not reach. The next level is the EU Council in Foreign Ministers format which, practically, give the final approval on the documents.

To an equal extent, the role of European bureaucracy is supplemented by that of the Member States whose influence is exercised both through national representation structures to EU and also through the Council Presidency. From this perspective, the Member States influence in determining the agenda of ESDP reveals the tendency to use a direct approach to the Presidency in order to promote certain initiatives. Obviously, these aspects are part of the so-called lobby process which is integral part of every decision-making typology. Clearly, the informal process favors the Member States which has a significant contribution in the development of the component of security and defense. Usually, the contribution component, both in terms of forces and capabilities constitutes the leverage within the informal dialogue with the EU Council Presidency.

2. The main aspects of the decision-making process on the operational dimension

Although subsumed from the institutional perspective to the External Relations and security, the ESDP has a certain degree of particularity in terms of procedures. Basically, we can talk mainly about intergubernamentalist behavior in its almost pure form. It is equally the result of the compromise between European bureaucracy and Member States as well as the effect of the latter reluctance in reducing the prerogatives over the national resources. For these reasons, the set of rules agreed under the CFSP it is used only as guiding principles for the decision-making process carried out under the CESDP.

The main effect of this situation is located inside the interaction between actors involved in the decision-making process, particularly regarding the size of operational commitments. Within this framework, we can talk even about an appetite of the Member

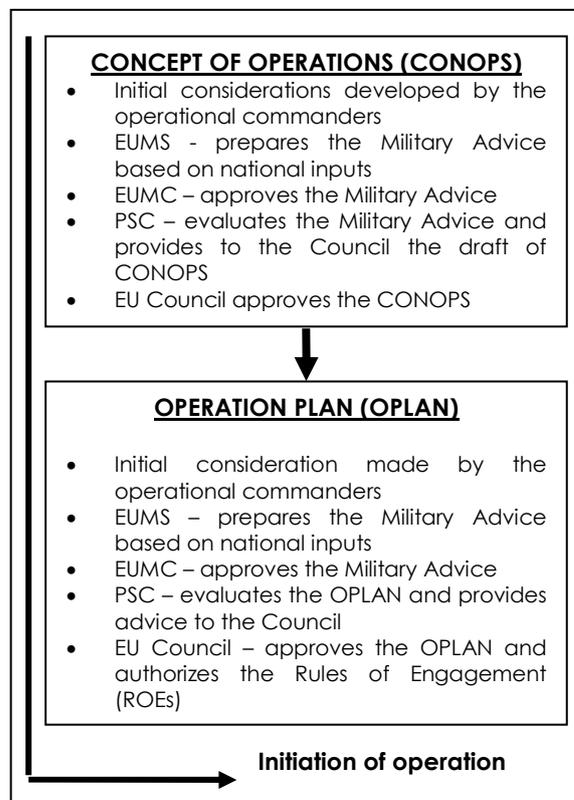
States in using their powers in order to influence the deployment of national contingents under the European flag. From this perspective, relational dynamics in the EU is targeted exclusively by the interests of Member States, the margin of maneuver of the bureaucracy and therefore of the Community approach being very limited.

Associated differences could be depicted, also, in the distribution of roles and powers between the European structures. As it is known, the lion-share is held by the EU Council, in the format of foreign ministers, the presence of European structures, particularly the European Commission, being extremely small. However, the role of the Council is affected by the Member States, which have the tendency to use it rather as a body of work, in order to preserve their prerogatives in coordinating the CESDP activities.

Clearly, this approach was reflected in structuring the EU decision-making on two levels. The first is the decision to launch negotiations on the operation *per se*, in which the main issues if political interest on the feasibility of the initiative. At the same time, the basic concern is the way in which the operation meets the Union's strategic interests. This requires a wide consultation process in order to mitigate the political concerns of the Member States. This component will record a variety of influences, from the classical typology of expression the national interests to the institutional “interferences” of the European bureaucracy through the General Secretariat and, especially, the High Representative for CFSP. In close conjunction with these aspects, the next steps are related

to the analysis of the EU capacity to conduct the respective operation. From this perspective, decision-making process is conducted in a comprehensive manner by involving both the political segment of European architecture, as well as military one or, as appropriate, that responsible for managing the civilian aspects of EU involvement in crisis management.

The second level of the decision making process for launching an operation is the segment covering the effective planning of the operation. Within this framework, the aim is to articulate a typology of civil-military approach at the level of the structures involved. In this context, the operational phase of the decision-making process takes place in parallel with policy dialogue on this issue. The purpose



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of this approach is to have a clearly and faster process and to formulate a coherent response on both dimensions, civil, political, or military.

From this standpoint, the Political and Security Committee is the main structure responsible for general management and for examining the options that may be the undertaken in order to respond. Pre-operational process is one iterative including three major phases: development of the concept of crisis management, development of the strategic options, and development of practical operational planning.

In this context, the PSC is responsible for developing the crisis management concept, which is meant to provide political and military objectives of the mission. Military specifications are based on the recommendations of the Military Committee, supported, in return, by the Military Staff expertise. Within the same logic, civilian recommendations are offered by the Committee for Civilian Aspects of Crisis Management. After approval by the EU Council of the Concept, PSC ask Military Committee for developing strategic military options which will be provided alongside with further recommendations. Based on this detailed military analysis PSC assesses strategic military options and propose a draft decision to the Council for approval. The next step is designation of the operational commander of the force.

At the same time, PSC requests the EUMC to develop the planning directive operation. Based on its approval by the PSC, the operational commander outlines the concept of the operation (CONOPS) and Operation Plan (OPLAN). The next step consists in filling the requirements for the operation. Within this, formal offers of forces and capabilities are committed by Member States on a voluntary basis, in the framework of Force Generation Conference.

Practically, this approach allows all Member States³ a high degree of involvement in the orientation of the decision-making process. As in the case of all international organizations, engaged in crisis management operations, especially the UN, easily the Member States retain full and simultaneously control in all phases of the operational process, including its concrete expressions. On this line, all decisions are made within the structures among which Member States are represented and can, therefore, to exercise their control.

Also, unlike the EU decision-making system used in other areas such as agriculture, competition, trade, the process used under CESDP is fluid but marked by a rigorous observance of procedural formalism. Therefore, the share of the informal component is quite limited, involving Member States and, less community structures. The “respect” showed by them vis-à-vis formal dimension of CESDP is, in the Member States perception, the only way through which their interests can be safeguarded. It is a concern that we find also at the smaller states which are extremely interested in maintaining balance in the decision-making and, by extension, within the entire European construction.

Analysis of Member States conduct in the context of operational commitments, offers a complex picture arising from the interaction of a number of factors. Of course, the spotlight is put on those political considerations and requirements that are characteristic of

³ *With the exception of Denmark which is not involved within the defence aspects of CESDP.*

each operation and obviously related to the particular conditions in the geographical theater. Of at least equal importance is the attitude of the Member States as regards the opportunity to launch an operation in a given area; their positions were shaped based on their strategic interests. From this point of view, the way in which states perceive the opportunity to deploy an operational commitment is juxtaposed on their behavior in relation with the geographical area.

Last but not least, the complex landscape related to the operational commitment is influenced by the effective capacity of Member States to feed the force generation process. The first major aspect of this complex picture is the early stages of the process of organizing the operational commitments, namely the area from where this kind of initiatives originate. In case of operational commitments, this is placed in the area of responsibility of Member States, each of which can, theoretically, to launch such an initiative. CESDP regulatory framework allows such an approach, but the management aspects of operational endeavors are located outside the formal framework and therefore subject to negotiations between them.

It is clear that the CESDP is perhaps the only policy of the European Union suitable to an "excessive" manifestation of national interests due to the absence of the specific *acquis*. Therefore, the negotiations between Member States and hence the informal component of the decision-making process, are even more significant, including at the level of operational commitments.

These aspects crafted the current situation in which EU operational experience is relying almost completely on the willing and interests of the Member States. We can talk in this respect about of certain of behavioral patterns. The most notably is by far the France case. Basically, the French model testifies the viability of using the full set of advantages that intergovernmentalism provides. This, both in terms of projecting, through operations, of its own security agenda, and, also, by promoting certain initiatives which give substance to the security and defence component.

If this is available in the case of bigger EU members, for the smaller states things are much more complex. It could be stated, without fear of error, the traceability and also the predictability of the behavior of members with less influence. In the vast majority, their basic option has been to support the launch of such types of engagement of the Union as a appropriate tool to increase their visibility. Also, this approach is meant, in their strategy, to offer certain compensations especially in filling various positions within the institutional hierarchy of the European Union. These are the main features of the smaller states approaches vis-à-vis CESDP. In spite of the pragmatic character, this tactic contributed, in essential way, to move further the European defence and security project.

The best evidence of this state of work is the structure of multinational contingents deployed under the aegis of the Union in various theaters of operations. If in the first period after adoption of CESDP framework, operations launched by EU included a limited number of countries, gradually, the structure of European operational commitments incorporated an ever increasing number of Member States. It was undoubtedly a gradual process that culminated in the involvement of countries traditionally considered to be "neutral". The most relevant case is that of Ireland, which after a neutral approach to the involvement in

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the operational development of CESDP changed radically his approach in order to become one of the most important actors in the field, by assuming the leadership of EU operation in Chad and Central African Republic.

The same attitude can be found in the case of so-called “neutral states” like Finland, Sweden, Austria and even those outside the European institutional, such as Switzerland.

All these are elements of a clear trend whose purpose will be involvement, in various forms, of the entire set of Member States. To the arguments set out above must be added the need for Member States to be involved in all decision-making aspects related to the operational dimension. A similar phenomenon was recorded in the context of creating the EU rapid response capabilities, particularly Battle Groups. Within this framework it can be traced the same approach which, ultimately, culminated with the participation in such formulas of all Member States.

It is obvious that this tendency will extend to the all areas managed by CESDP, particular after the adoption of the new European Union Treaty. The Lisbon Treaty increased relevance for the development of ESDP lies mainly in its implementation formulas, especially those related to the Permanent Structured Cooperation⁴ in the defense area. From this perspective, providing relevant capabilities for crisis management operations is one of the basic criteria for eligibility of membership within this type of cooperation. This could anticipate a consolidated tendency regarding the national involvement within of EU operations. Risk of the self-placement outside such formulas cannot be assumed by any of them.

Also, implementation of structured cooperation formulas in an area addressed only by the logic of multi-level consensus generates a series of challenges especially on the future of the decision-making design, including operational component. Basically, the effects of the new system could generate, first of all, the emergence of the second decision system associated with the structured cooperation formulas. And from this perspective it is obvious that the choice of Member States, regardless of the weight which they have in the Union, will be participate in these formulas. This is the only way to combat the "perverse" effects of this system and to preserve the principle of consensus in the security and defense field.

Additional to the above mentioned effects, the strict control imposed by the Member States leads to a relatively opaque nature of decision making, particularly in relation to external factors of the Union, but which are involved in the operational commitments. This problem involves the so-called third countries, the allied non-EU members (Turkey and Norway), as well as states like Russian Federation and Ukraine whose security interests require involvement in the operations conducted by the European Union.

Undoubtedly, within this framework, the most well-known case is that of Turkey's participation in the EU operations, which was always accompanied by an extensive political debate centered on the level of involvement in the decision-making process. In fact the

⁴ *Protocol on Permanent Cooperation established by Article 28 of the Treaty on European Union.*

issue of involving third countries in the operations is one of the main challenges for international organizations. The issue includes a significant ethical dimension, especially in regard to requests of these countries to be involved in a sufficient and enhanced manner within the decision-making process, especially on the component related to the operations to which they contribute.

Problem is valid for the European Union as well as for NATO. In the Alliance, the accents are even radical, due to the fact that countries are fully involved in the most demanding mission of the century which is ISAF operation in Afghanistan. Nevertheless, the effects of this situation were reflected differently at the level of the two organizations. In case of NATO, the difficulties to fulfill his mission in Afghanistan were those which, practically, generate the need for implementing a flexible approach in the sense of involving the States participating in the operation right from the initial stages of decision making.

The EU approach in this field is quite different. Concession made on these particular issues was a minimal one, institutionally implemented through a Committee of Contributors, whose duties relate more to the specific management of issues arising from the conduct of operational activities. In other words, the European approach aimed at maintaining the exclusive prerogatives of the Member States of its strategic decision-making stages.

To what extent this approach is adapted to the contemporary realities is difficult to give an answer peremptorily. Operational realities of the last decade have shown that participation of third countries in the operational commitments multinational organizations constitutes an added value. For the European Union this aspect has a particularly significance in terms of relative maturity of ESDP. Moreover, the contribution of third countries which are depository of significant operational experience as well as relevant capabilities, exceed by far the significance of the membership.

It is beyond any doubt that the involvement of third countries in EU-led operations and, hence, their involvement in the decision-making process will have a greater relevance in terms of power and capacity growth requirements. The relevance of these countries contributions will be even higher especially in the context of the member states fatigue caused by operational endurance. From this perspective, additional contributions come from states such as those listed above are likely to become more attractive for European operational commitments. Also, it could be anticipated that this situation will create additional opportunities for states coming from the outside of the European institutional perimeter and, ultimately will generate the radicalization of their positions regarding a greater involvement in decision-making process.

Within the same logic, the operational component of the EU decision-Making process will be subject to the influence of other external factors especially institutionalized ones. The most relevant is, of course, the UN which is one of the main partners of the European Union in the crisis management field. Within this context, the entire history of CESDP was marked right from the beginning by the gradual development of cooperation relations between these two organizations. The overarching principle was that of providing

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the suitable support, in terms of operational commitment, for the United Nations endeavors all over the world.

This approach it was also used in relation with regional organizations such as the African Union. The analysis of operational developments in recent years shows very clearly that the EU relations with other international actors has represented the basis for almost all operational commitments undertaken by the European Union, approximately 90% of crisis management operations being launched as a result of external requests.

Conclusions

Analysis of the decision making parameters certifies the reality of a still unfinished process in which there is a series of improvisations designed to overcome deficits of a procedural nature. The presence of the latter is caused, to a decisive extent, by the various gaps and overlaps within the existing legal framework of the CESDP.

This has led to the development of decision with sufficient gaps but which, paradoxically, allows greater flexibility. It is obvious that in crafting the decision-making system, EU used, to a large extent, the experience of North Atlantic Alliance. But the level of assimilation has not reached the upper limits, leaving a number of features designed to meet the specificity of the European Union. Clearly, the procedural rules related component of the military component benefited greatly from the experience of NATO. There are many areas showing major similarities, both in terms of dominance principle of consensus and in the level of planning or carrying out proper operational commitments.

Nature of the European Union has established, however, limit the assimilation model used by the North Atlantic Alliance. Key benchmark is the civilian component of ESDP, to which have been added the main elements of novelty in terms of ongoing decision-making typology. Closely linked with this, the overall objective of ESDP is to create the capacity for launching the operational commitments in a comprehensive manner likely to generate particular forms of structuring the various stages of decision-making.

These elements were added to the extremely "complicated" agenda of the NATO-EU relations. Such procedural and institutional differences are likely to exacerbate the difficulties caused by the persistence of political disputes. Unfortunately, the problem of existing asymmetry in the decision-making processes of the two organizations is perhaps the most difficult issue that could benefit from a structured settlement. This especially since the new EU Treaty (Lisbon Treaty) introduces a number of major institutional changes that will significantly affect the decision-making, emphasizing its particularity.

Nevertheless, the current realities testify the existence of the political will to adapt the regulatory framework governing the European decision-making in the security and defense field. At the same time, there is a significant dynamism which can conduct to further adaptation of the institutional way of doing business. Even the frequent changes arising from the adoption of successive EU treaties, must be seen as steps to identify the optimal formula to operate in the current security environment. Each of these steps has enabled the development of decision-making process, which allows positive prospects in the occurrence of a system adapted to environmental realities and which will be able to support the Union's international profile.

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NETWORK-CENTRIC WARFARE AND NETWORK ENABLED CAPABILITY IMPLICATIONS OVER THE C4ISR TYPE INFORMATION NETWORKS IN THE ROMANIAN ARMED FORCES

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The last two decades have been marked by the evolution of mankind toward the Information Age, a new stage of societal development where the modern society is affected, among other factors, by the explosive technological changes. Within the context, technology represents the main driver for change. To be more specific, small innovations emerged in the information technology and communications are considered responsible for global transformations in the economy, politics or culture structure. This assertion also extends its validity over the military phenomenon, which is just another form of human behavior. The large scale use of the information technology and communications led to a cybernetic battlefield and the change of the war waging philosophy, with the rise of new concepts that better describe the new reality: Network Centric Warfare, and Network Enabled Capabilities.

1. Introduction

In our opinion, the conflicts' physiognomy of the end of 20th century and beginning of 21st century have radically changed. The complex set of factors which personalize the conflicts include particular political, economic and strategic situations, new political and strategic goals, new objectives, specific action forces and means, a different conception and intensity, a new attitude against the opponent, different action spaces, a comprehensive variety of dominant action types, and ever more sophisticated and unexpected ways of violence outburst. The world of these conflicts is a world of asymmetric confrontations.

Out of the main features of the current and future military conflicts it is worth to mention the following¹:

- Causal complex that results from the existing incompatibilities between dictatorial political or autocratic systems and democratic ones;

¹ Cf. **Frunzeti, T., Mureșan, M., Văduva, Gh.,** *Război și haos, Editura Centrului Tehnic - Editorial al Armatei, București, 2009, pp.27-29.*

- Distinct fingerprint of the new military conflicts determined by the huge disparity between the rich world and the poor world, between the civilization of high technology and the traditional civilizations, diversified, with ancestral values, customs and traditions;
- The technological effect given by the different technological development;
- Different conflict intensity, from extreme violence of the terrorist attacks to domination or imposition of a certain conduct;
- Continuous Nuclear, Radiological, Bacteriological and Chemical threat;
- Dissymmetry and asymmetry;
- Ubiquity of the action – reaction binome;
- Prevention and the primitive character or repression;
- The new terrorism – antiterrorism binomial implication;
- The patchwork character;
- Unpredictability.

These features could be supplemented with others like flexibility and confusion, indirect character, political and religious extremism, etc.

The typology of war is extremely diverse, but when we refer to the conflict dimension we should only take into account three types of war, namely the asymmetric warfare, the cognitive warfare and the high technology and information based warfare (network-centric warfare).

The essential principles of the Information Age warfare are:

- ✓ Information superiority;
- ✓ Common access to a high quality system of information;
- ✓ Dynamic self-synchronization – to increase the freedom of the small operational structures;
- ✓ Dispersed forces and discontinuous operations;
- ✓ Flexible forces – easy transfer from the massing forces approach to the effect based approach;
- ✓ Large scale use of sensors ensuring a higher information level;
- ✓ Compressed levels of warfare and operations driving prevalently to joint operations;
- ✓ High speed of the command procedures;
- ✓ Full spectrum dominance – the ability of forces, operating unilaterally or in combination with multinational partners to defeat any adversary and control any situation across the full range of military operations².

Information operations represent the integrated use of the electronic warfare actions, psychological operations, deceiving, security of operations, command and control operations, “information supremacy” operations, psychological actions, hackers’ actions, economic information actions and virtual space actions³:

² Cf. *Joint Vision 2020, Department of Defence, Washington D.C., 2000, p. 4*

³ Cf. **Topor, S.**, *Războiul informațional, Editura Universității Naționale de Apărare, București, 2005, pp. 25-27*

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✓ Command and control operations – neutralize the command and the command-control systems of the adversary. These operations integrate psychological operations, deceiving, security of the operations, electronic warfare and actions of physical destruction;

✓ “Information supremacy” operations – projection, protection, and annihilation of the systems which contain enough information to dominate a conflict space;

✓ Electronic operations – equipment employed to reconnoiter, neutralize, and destroy the electronic systems that generates or convey information, as well as cryptographic techniques;

✓ Psychological operations – the information is used to change the attitudes or options of partners, neutrals or enemies;

✓ Hackers’ actions (software piracy) – computers and communication networks are the target of the active and passive attacks with disruptive and destructive software;

✓ Economic information actions – blocking or acquiring information in order to gain economic supremacy;

✓ Virtual combat space actions – fundamental and technological research of the war games and futuristic scenarios.

Offensive information operations are intended to neutralize the information systems and actions of the adversaries, while the defensive information operations are designed to defend the own elements against similar offensive operations of the opponents.

One of the modern ways to conduct combat operations is the Network-Centric Warfare (NCW). It is a relatively new state-of-the-art technological and information concept, with global scope, easy to access only by entities equipped with performing information and analysis systems, cutting-edge technologies, modern information technology and communications, and the technical support structures needed.

From the perspective of conflict dimension, network-centric warfare could be perceived from at least three points of view:

✓ Theatre warfare representing a confrontation between two or more armed entities, in a well defined theatre of operations as geographical area and philosophy of the real actions;

✓ War extended in other areas than those specific to the armed combat, like cyber space, media, economic and financial dimensions;

✓ War in the theatre of concepts, which has as goal the knowledge dominance, with a scientific foundation of some systems of action and reaction allowing the intelligent and efficient use of existing forces and means, together with the innovation of new ones, more performing, and more difficult to be identified and discovered.

The concept and employment of NCW belong to the nations that possess high level of technology, and developed information technology and communications, especially the United States of America, the only nation which successfully used them in a direct military confrontation, in Iraq.

The NCW concept provides six essential capabilities⁴:

- Real and virtual networks equipped with C4ISR (similar) systems;
- Relational databases;
- Rapid, flexible, expeditionary and interoperable forces;
- Interconnected weapon systems;
- Projection of forces and means;
- Networked logistics.

Although during the war in Iraq NCW proved its effectiveness, it still has some limits in the post-war operations. Under these circumstances, although NCW is likely to dominate the combat space (generally, the armed confrontations), it is not largely available. According to all probabilities, NCW will not succeed, at least for the first two decades of the 21st century, to provide all the advantages it has been created for, unless the combat environment has a high level of certainty dynamic, thus a disproportioned warfare. NCW is not a chaotic warfare, but one that has a rapid development and a predictable end, and that could produce chaos, since disproportionality brings quite serious problems in the immediate dynamic of the political, economic, social, information, and military situation.

2. Employment of the C4ISR Systems in the New Operational Concepts: Network-Centric Warfare and NATO Network Enabled Capability

The concept of NCW describes the combination of emerging tactics, techniques and procedures that a networked force can employ to create a decisive warfighting advantage⁵. Although this concept is strictly related to the reality of American military forces, its evolution – NATO Network Enabled Capability (NEC) – extended the theory over entire North Atlantic Treaty Organization. NEC is the cognitive and technical ability of the Alliance to conduct different components of the operational environment, from the strategic level, including NATO Command, to below at the tactical level, using a unique integrated network information infrastructure⁶.

The purpose of the employment of new concepts like NCW and NATO NEC in planning, organization and warfighting is providing all leaders from every subordinated level with near real time information necessary to understand the tactical situation and to act according to the commander's intent. This increased capacity of command generates new operational challenges. While the subordinates have broader access to the tactical situation, high level commanders have access to very detailed tactical plans. The high level commanders should resist the temptation to conduct minor military actions at the subordinates' level, because their intention could reduce the benefits of the modern information systems and could also alter the level of understanding of the situation they support. As a result, it is necessary to promote strong leaders at every level, and to build

⁴ Cf. **Frunzeti, T., Mureșan, M., Văduva, Gh., Război și haos, pp.35-36.**

⁵ Cf. **Garstka, J.J., Network Centric Warfare Offers Warfighting Advantage, Signal Magazine, USA, May 2003.**

⁶ **NNEC Vision and Concept, MCM-0032-2006, Allied Command Transformation, Norfolk, Virginia, USA, 2006, p.2.**

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troops' confidence and cohesion on complex and combined systems and equipments C4ISR type, put in practice by realistic training, drills and field exercises.

A robust force strongly connected in network improves the information exchange, cooperation, quality of information, and the situational awareness that generates a significant growth of the mission efficiency. It has been practically demonstrated that information networks have positive impact on the combat power, synchronization of the staff personnel and decision makers on the battlefield, casualties cut, amplification of the force agility and operational tempo.

The new sensors, extended connectivity and new information systems substantially concur to the efficiency of the troops' combat actions. Information distribution increased the situational awareness with the direct improvement of the perception of battlefield environmental elements, and growth of both maneuver speed and fire precision. Extended connection enables troops to conduct combat actions on larger distances and spaces than in the past. Information availability and reliability allow a quick reorganization of the tasks and a full integration of the military units new entered in the theatre of operations. The network's level of development determines synchronization and correlation in time and purpose of the dispersed troops.

Command of a robustly networked force improves information sharing, collaboration, high-quality information, and shared situational awareness resulting in significantly increased mission effectiveness. The networked information has impact on the application of combat power, battlespace synchronization, decision-makers and staffs, lethality and survivability, force agility, and operational tempo⁷. **Figure 1** presents this process in detail within the network enabled organizational context.

Nowadays, there is a trend for the extended use of the information technology and communications in defense systems in order to develop operational capabilities at minimum costs. In most of the situations, the main intention is oriented toward the network working, namely making networks of sources, information, execution level, commanders, etc. This trend has the advantage of the use of the great developments in the information technology and communications field. Concepts like NCW and NATO NEC are designed to develop and extend important capabilities as: information collection, processing and dissemination; decision quality and command efficiency; cooperation between different structures and levels of the same structure; flexible use of the military units and defense systems⁸.

⁷ Cf. **Cammomns, D, Tisserand, J.B, Williams, D.E., Seize, A., Lindsay, D.**, *Network Centric Warfare Case Study, Volume I- Operations, V Corps and the 3rd Infantry Division (Mechanized)*, 2003, p. 13.

⁸ Cf. **Timofta, G., Vasile, R.V.**, *Direcțiile de evoluție a sistemelor C4ISR impuse de cerințele rezultate din conflictele militare contemporane, Sesiunea de comunicări științifice „Strategii XXI”*, Universitatea Națională de Apărare „Carol I”, București, 2008, p.2.

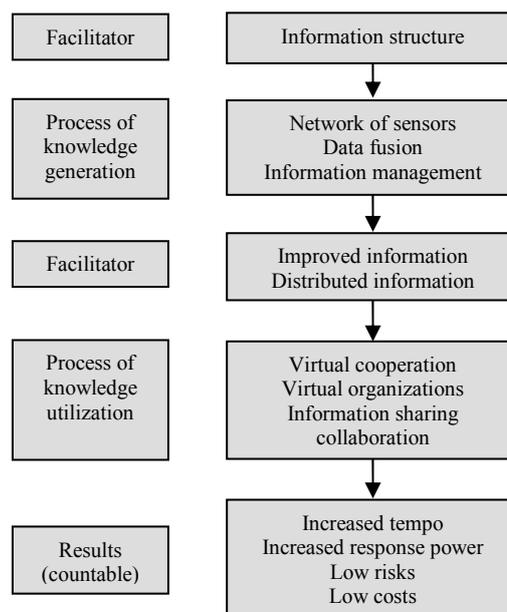


Figure 1: Command of the networked forces

These new concepts impose enhanced methods or even new methods of conducting operations. Introducing new capabilities could lead to radical changes in the defense organization, both from the point of view of technical system exploitation, and troop tactics and specific training. Concept development concurs, as well as with the efforts of adaptation to the global strategic and political environment established after the Cold War age, with its particular fragmented and sometimes unclear security threats. One of the main elements demanded by the NCW and NATO NEC concepts is achieving interoperability. Interoperability is a procedure used to strengthen equally the efficiency and effectiveness of the combined or joint forces, and the required capabilities for the whole operations range of the Alliance. Interoperability is an essential facilitator and an important force multiplier⁹.

Several operational scenarios for operations or crisis management could be conceived in order to better understand the missions assigned to the C4ISR systems, and to observe major information needs and requirements. Information requirements include data, communications, capabilities, and cooperation tools that facilitate success in any scenario.

⁹ *Enhancing Interoperability, Executive Working Group, Brussels, 2008, p.1-1.*

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The relationships between operational scenarios and information requirements assigned to the C4ISR systems could be represented like in **Figure 2**¹⁰.

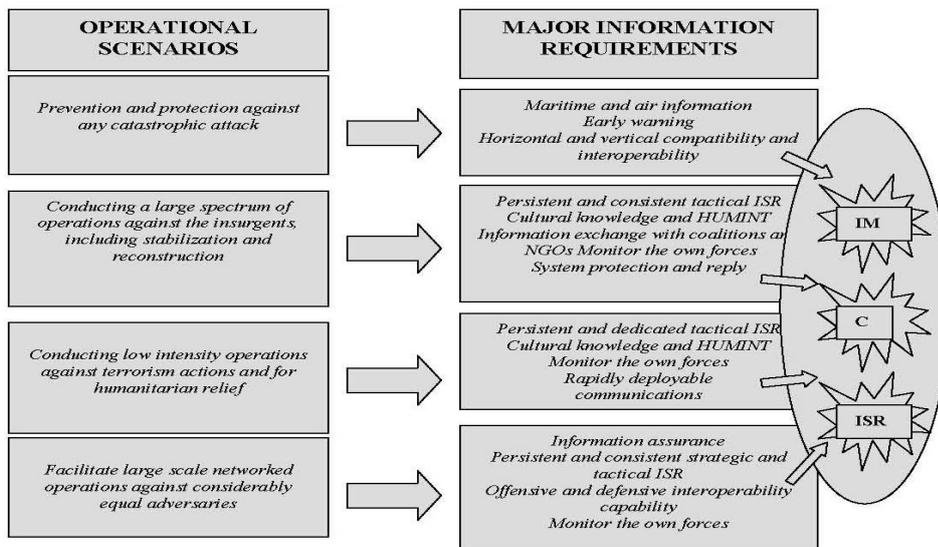


Figure 2: The relationships between operational scenarios and information requirements

Although after the scenario assessment a certain common line could be observed, this demands some particular information requirements out of which eventually three specific areas or domains will result as follows: information management (IM); command and control information capability (C2); information surveillance and reconnaissance (ISR). Taken as a whole, the three combined domains form a so-called information capability for combat/operations.

3. NCW and NATO NEC Implications Over C4ISR Type Information Networks

Military operations of the 21st century are characterized by a continuous growth of complexity due to the joint effort to accomplish the objectives, and to the interlaced nature of strategic, operational and tactical levels, as well as to the mixture of military and civilian objectives. Increasingly more, military commanders face the problem regarding the

¹⁰ Defense Science Board, *Summer Study on Information Management for Net-Centric Operations, Vol. II, The Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, Washington, D.C., 2006, p.10.*

conciliation of conducting traditional military operations with overall mission objectives, and the national policy goals.

Globalization, technological developments and the transition pace to the Information Age deeply affect the political, social and security environment, including NATO's ability to answer the new threats, demanding new deterrence, warning, and prevention strategies against terrorist attacks, with amendments in the proper application of the military and civilian powers, within the effect-based operations.

This kind of arguments determine the transformation of the Alliance and its members alike by enhancing the decision making processes based on information superiority and NEC. This approach aims at a deeper integration of political and military tools, adoption of new methods and organizational institutions able to generate rapid and decisive results at the tactical, operational and strategic levels, outside the traditional areas of responsibility. Resizing the decision making process, based on information superiority and implementation of the NCW and NATO NEC concepts represents essential parts of the armed forces transformation, with a decisive role for the information systems. The general framework of the Alliance transformation is presented in **Figure 3**.

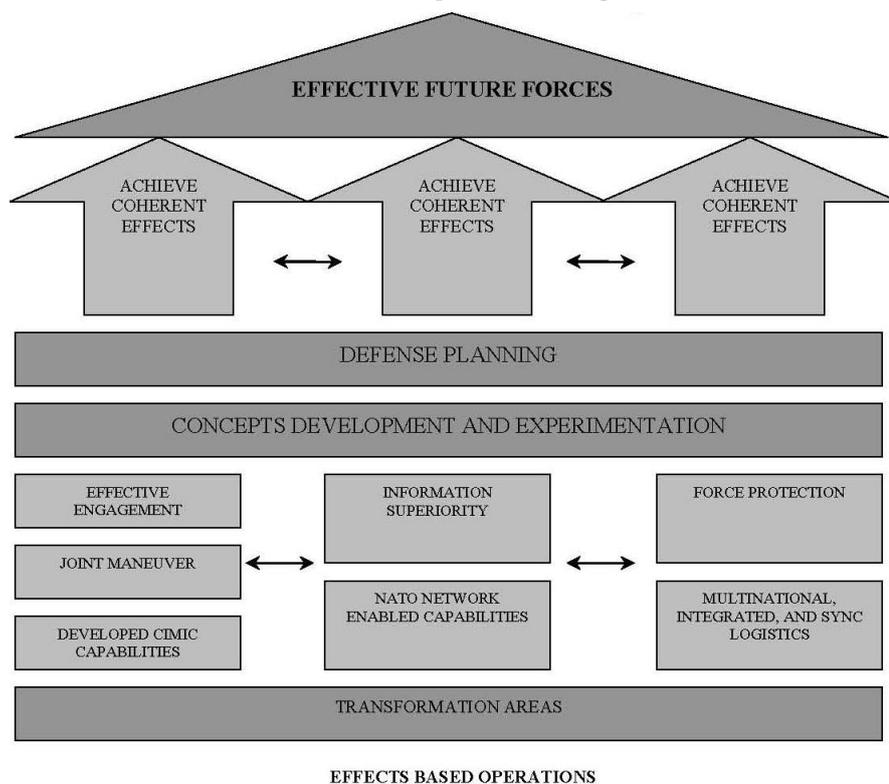


Figure 3: General framework of the Alliance transformation

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This purpose is ensured in the military by developing the potential of the C4ISR systems that rationally encompasses the elements involved in the sensors interconnection (sources of information), performers/weapon systems (operational elements) and decision makers, together making possible the development of networking and effects based operational capabilities¹¹. Providing information assurance, with direct influence on combat power and mission efficiency, drives the optimization of the deployment and support of joint forces.

The future combat space will include elements of the strategic concepts of NCW and NATO NEC that first will transform information in a power factor and increase the reaction capacity and precision of force commitment, and secondly will quickly include all the conceptual and technological innovations from the military. It is important to emphasize that if the new millennium conflicts will be conducted mainly in a coalition or alliance environment, then the most difficult obstacle is represented by the removal of the technological gap between the participant states.

The conceptual framework of NCW and NATO NEC and the way the integration of data collecting capabilities, decision making and transmitting the decision to the operational elements is conceived are synthetically presented in **Figure 4**.

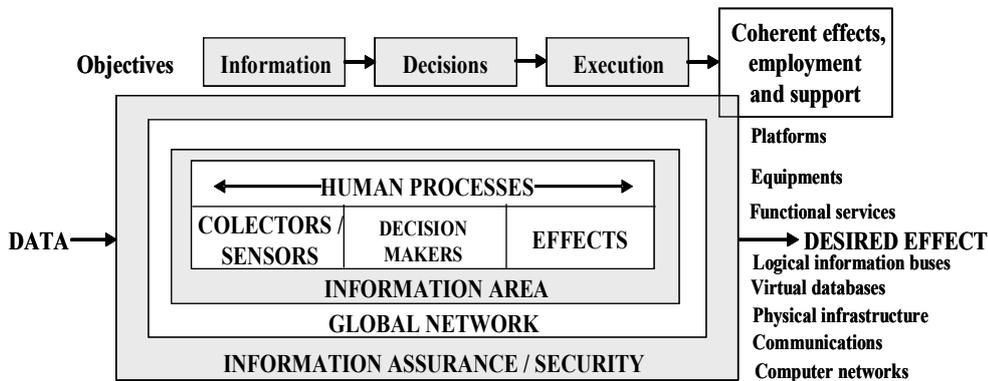


Figure 4: The conceptual framework of NCW and NATO NEC

The integration of these dimensions (elements) allow NATO structures and NATO nations to create a common picture of the battle space and consequently to enhance its level of situation awareness and the effectiveness of the common actions. The principle of making the common operational picture is shown in **Figure 5**.

¹¹ NATO Network Enabled Capability Feasibility Study, v 2.0, Executive Summary, NC3A, Brussels, 2005, p.7.

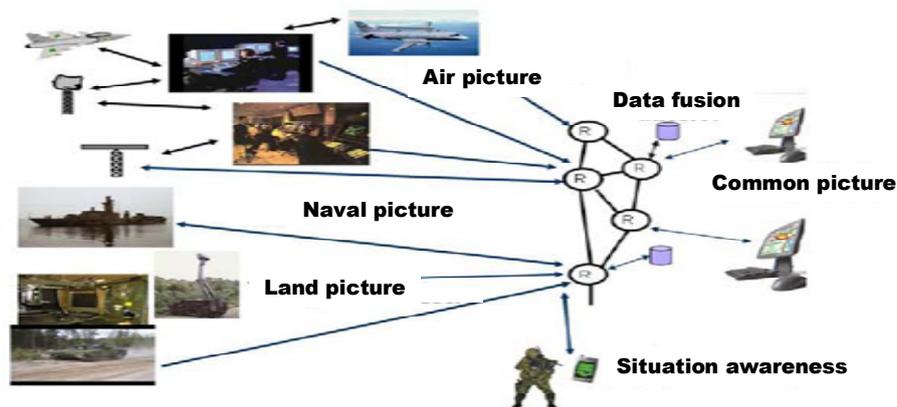


Figure 5. The principle of making the common operational picture

Concepts like NCW and NATO NEC will allow troops to be able to act within their structures or a coalition of forces in a way that should be redefined to match the present-day concepts regarding the military operations and architecture of the information systems. Conducting the forces demands integrated C4ISR systems at every echelon. Under the conditions of particular dynamism of the military actions and positions fluidity, the C4ISR systems have to ensure full cover with leadership alternatives of the entire area of responsibility, real time command and control of the available forces and means, as well as efficient logistic support. The implementation of the NCW and NATO NEC concept is seen as a force multiplier, a generator of information and decision superiority, granting substantial growth to the mission efficiency.

4. Assessment of the C4ISR Capabilities Development in the Romanian Armed Forces according to NATO NEC Environment

At this moment, transformation is the most important noticeable fact in the military. It is a key word in NATO and at the same time in the Romanian Armed Forces. Basically, transformation refers to:

- ✓ Reconsidering the nature of military operations, as well as doctrines, skills and assets.
- ✓ Influencing the C4ISR systems, with two general frameworks, namely Network Enabled Capability and Critical National Infrastructure.

The main purpose of the two frameworks is to obtain information superiority, which is one of the fundamental pillars of the NATO NEC concept.

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Network Enabled Capability provides better and faster support of the entire operations spectrum. Its most important desired results are:

- Information and decision superiority (the first objective of NATO NEC);
- Information coherence and overall users' interoperability;
- Increased awareness;
- Increased flexibility.

These results become possible only contained by a Networking and Information Infrastructure that brings together sensors, command and control centers, and effectors, regardless they are on land, sea or air.

In our opinion, the basic criteria of NATO NEC are the following:

- Intelligent networks;
- Information management software included in network nodes;
- Distribution of broadband services;
- End-to-end Quality of Services;
- Security solutions distributed evenly in the entire system;
- Users' mobility.

The purpose of the NATO NEC concept is to create intelligent networks able to have an operational contribution to information management and dissemination. This service requires information software management applications included in network nodes, implemented command and control, and administrative applications (Intranet), and large-scale use of graphic and imagery tools.

For these applications broadband services are needed. These services require real time data, i.e., multimedia service with guaranteed end-to-end Quality-of-Service for streaming video, sensors management, effectors control, etc.

This whole environment demands security solutions distributed evenly throughout the system, in order to serve different user communities (information security, registration and authentication of the users, etc.).

And, last but not least, the NATO NEC concept requires the support of the users' mobility, specific systems and technologies that extend voice, data and multimedia services to the fielded units, down to soldier level.

Taking into consideration the second framework mentioned, it is important to emphasize that it started to be consistent after 9/11, having the following basic criteria:

- ✓ Proprietary or dedicated data flows;
- ✓ Network redundancy (grid systems) and different transmission media (radio relay, satellite, optic fiber);
- ✓ Automatic restoration of the users' connections through Multiple Priority and Preemption mechanisms;
- ✓ Operations System Support;
- ✓ Use of on-line certified encryption equipment;
- ✓ Control systems of the access to the public systems.

Network Information Infrastructure is made up of strategic Network Information Infrastructure – National Military Communications Network; tactical Network Information Infrastructure; Functional Area Services, as well as users and missions.

The first implemented element and one of utmost importance is the Permanent Telecommunications Network. This is the infrastructure of the National Military Communications Network.

The Strategic Radio Network is a single channel network based on performing radio equipment designed to provide communication capabilities for service staffs and deployable large units or for generation-regeneration of forces on maneuver, as well as a backup solution to the Permanent Telecommunications Network ensuring mainly data communications. In order to provide supplementary communications capabilities in some areas, there are deployable elements of the Permanent Telecommunications Network mounted on containers or special vehicles.

Each service (especially the Air Force and the Navy) can set up their own specific sub-networks.

To improve the performance of the Romanian National Defense Network, we consider an evolutionary strategy should be adopted. This strategy is basically founded on the following stages:

- ✓ Assessment of the existing systems;
- ✓ Projection of a national Overarching Architecture;
- ✓ Development of necessary Reference Architectures and Target Architectures;
- ✓ Design of the Roadmap for Target Architectures.

The stages already started to be approached according to the operational requirements and available funds.

Today, the Permanent Telecommunications Network represents the infrastructure of the National Defense Network that is used by all the structures of the Romanian Armed Forces. Over this communications system there were accomplished: the military INTRANET system (INTRAMAN), encrypted video-conference system, specific naval forces applications (ARGUS), environmental applications, etc. At the strategic level, these networks represent the pillars of the Network Information Infrastructure. The development concept of the National Defense Network will allow the evolution toward a component of the NATO network confederation. The current performances provide operational capabilities and interconnection with other networks with certain limitations. In our opinion, the most important fact is the permanent commitment for the improvement of these capabilities.

The strategic Network Information Infrastructure supply communications in support of a significant number of functional applications, such as: the National Air Command and Control System (including sensors connections – FPS117, GAP FILLER and radars and updated analogical vectors – air bases, Soil-Air Missiles, electronic warfare units), NBC Surveillance and Warning System, National Integrated Meteorological Information System, Maritime Complex Observation System (SCOMAR), Military INTRANET, etc.

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Today, the Permanent Telecommunications Network is an enhanced EUROCOM system based network with EUROCOM, STANAG and commercial (ITU-T) gateways to other networks. All of these ensure a high level of interoperability with commercial (ITU-T), and tactical (STANAG and/or EUROCOM) networks. The Permanent Telecommunications Network is also interconnected with NATO General Communications System (NGCS), and with the Italian National Military Communications Network using the SICRAL satellite system. In the future, the Permanent Telecommunications Network will provide services to NATO users on Romanian territory. Furthermore, there is possible to interconnect the Permanent Telecommunications Network with other nations' tactical networks.

The Strategic Radio Network is intended to provide minimum voice, data and link capabilities for all tactical and operational units HQs, when other means of communication cannot be used. This network is employed at the level of the services' HQs, for tactical and operational units (mainly for the units made available for NATO operations). The communications provided are protected to interception and jamming with incorporated crypto devices and frequency hopping equipments. The Strategic Radio Network has integration capabilities with INTRAMAN messaging services.

Major services offered by the military INTRANET or INTRAMAN, as well as the information systems which use it as support infrastructure are:

- Basic information services (electronic mail, files and printing, WEB, hierarchical activity management, hierarchical documents flow management, etc.).
- Support for operational information systems:
 - o Support Information System of the Military Actions (SISAM)
 - o Defense Intelligence Information System (SIA)
 - o Modeling and Simulation Information System (SISMIM)
 - o Weapon Systems (SISARM)
 - o Assisting Military Education Information System (SIMIL)
 - o Integrated Logistic System (AILS)

There are Out Of Area extensions of the Romanian National Defense Network to support our deployed troops in overseas operations. There are also extensions for the Romanian Ministry of National Defense representations to NATO, ACO and EU. These extensions provide voice, data and VTC services.

5. Expansion of Romanian Armed Forces' Defense Capabilities by Implementing Integrated Technologies to Ensure Flexible and Multifunctional Capabilities

The operational needs that can be defined for a defence common network are:

- Connectivity for all involved segments: political level, military at all levels, international coalition like NATO, EU and others
- Access to the network to meet criteria like flexibility, simplicity and security, in-country or out-of-area, in order to allow the users to exploit the network:
 - o From fixed sites through military, governmental or commercial infrastructure;

- From fixed sites via deployable CIS/CCIS assets;
- From mobile assets/commands/units via connections set up by means of remote access services.

One of the most important technical requirements for the National Defense Network is to comply with the most relevant standards to ensure interoperability. The network topology has also to grant suitable flexibility, survivability and streamlined services integration according to users' needs. The network should also support different services / applications / functions and the relevant information flows, granting both autonomous and common operations, integration and data exchange when required by specific services or applications.

No less important is the employment of the latest technologies such as Software Defined Radio, Secure Communication Interoperability Protocol, and TACOMS Post 2000, etc.

The National Defense Network should provide support for:

- Network interconnecting services
- Core services
- Functional areas services for human resources, reconnaissance, operations, logistics, planning, geo-meteorological, and simulation, etc.

This approach is similar to NATO's approaches used for the development of NATO Bi-Strategic Command Automated Information System, Deployable CIS, and NATO General Purpose Communication System.

Within the described scenario, an evolutionary process leading to a "network based" capability within an acceptable timeframe is of utmost importance. To this aim, actions should be concentrated on the implementation of a "Common Network" by taking advantage of the recent procurements and by optimizing and integrating systems, already in use or to be introduced in use in the near future. Under the assumptions on targets made, the following requirements will lead the process:

- Support of broadband services (multimedia integrated services);
- Optimization of the available transmission bandwidth;
- Upgrade / implementation of access networks;
- Increase of network security through NATO approved encryption systems, and NATO security concepts (i.e. multilevel security);
- Upgrade of existing or introducing new IT platforms to support core services;
- Increase of integration with the achievement of out of area seamless support through satellite bearers, and high capacity connectivity to mobile assets;
- Enhanced interoperability between National Defense Network and NGCS;
- Increase of automation and control functions to replace reduced manning.

These requirements lead to final objectives achievement:

- Building a secure and highly survivable network;
- Full integration of both strategic and tactical network components;

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- Network architecture and adopted technologies able to optimize the capabilities regarding the efficiency and management;
- Evolution of services.

Starting from the present situation, a sequential action plan could be defined in order to build a common network for the Romanian Armed Forces. The services provided by the network are core services and functional area services, in accordance with the concept of Bi-Strategic Command Automated Information System. Core services are fairly well extended in the network, and in our opinion the main issue is represented by less developed services dissemination to all the users.

In the Functional Area Services, Romanian Armed Forces are in the stage of efforts and funds investments. These activities are driven by the need of real time information exchange between effectors and sensors, as well as by specific services for different missions. The services will be provided starting from core area toward specific areas as national users, NATO users, users from different coalitions, and participants to abroad missions.

For a short time perspective, we believe that Romanian Armed Forces will focus their efforts on integration of existing systems and introducing only integrated subsystems, or subsystems with integration capabilities into the existing network.

The Romanian Armed Forces are in the process of testing and finalizing the integration activities of new Electronic Warfare System - the program Azur, and Weapon System - Hawk XXI. Also, there are two main programs for services – SCOMAR – surveillance and reconnaissance system for the Naval Forces Staff and SCCAN – command and control system for the Air Force Staff.

For the near future ambitions are higher. Because of the highly demanding capacity of new information systems, the Romanian Armed Forces will concentrate efforts for up-grading the existing infrastructure by introducing high-rate supports. For some areas high capacity fiber optic area networks will be realized. In order to increase the processing capabilities, multi-protocol – multi-service switches will be introduced.

Furthermore, the efforts will be focused on:

- ✓ Integration of the legacy systems made through specific gateways that will not limit the performances.
- ✓ Use of software defined radio that will be extended for all services and all type of communications. Radios with these capabilities are already in use.
- ✓ Setting up a global network management system.
- ✓ INFOSEC area, protecting the information and the systems being another major task. IP encryption is to be used as a standard solution.
- ✓ Sensors integration and use of smart sensors.

Conclusions

The Romanian Ministry of National Defense has started different up-grade programs, many of them at lower echelons, due to the commitment level at the programs' initiation moment. Currently, this commitment involves higher echelons, because it became

obvious that because the lack of coordination these systems could be hardly integrated at brigade level.

Analyzing this situation, the Communications and Information Directorate from the General Staff, with the Land Forces Staff support, decided that the only way to solve all the aspects regarding integration is to start a process of defining the C4ISR system at brigade level. The reason for this decision is that a multilevel, flexible and operational C4ISR system is potentially the most important force multiplier for overall battle space.

In order to develop a competitive C4ISR system, we believe that the architecture recommended in NATO C3 Systems Architecture Framework is the best approach. As basic technology battle space digitization and fundamental idea is C4ISTAR concept are adopted. No less important is the coordination with interacting programs.

The development and use of operational, digital and mobile communications to provide reconnaissance, command and control data to the soldier are based on operational requirements, and technological, time and budgetary constraints.

The C4I system should provide command support for all levels. All weapon systems have to be integrated. Mobility is a basic feature for all tactical systems. Protection is the key behind which security, electronic countermeasures, and data encryption lie. Communications support should provide enough capacity for command and functional services' support. Nonetheless important, the system must ensure interoperability between national and international areas, within the North Atlantic Alliance or with the military structures of the member nations of the European Union.



DUAL USE of TECHNOLOGIES

Vice-Admiral (ret.) Ion Alexandru PLAVICIOSU, PhD

1. Introduction

One characteristic of today's society is the existence of dynamic structures with rapid transformations with constant character, for which the necessary time for making decisions has been enormously compressed, the succession turning into simultaneity. In this context, it is normal and desirable to have a large transfer of technology from the areas in which, by massive investments specific to defense, nuclear, and aerospace technologies, important achievements have been obtained, and the boundaries of knowledge have been exceeded.

Within this approach, the concept of dual use of technologies has been imposed, which actually represents the transfer of knowledge and applications from exclusive fields previously specified in the civil field, in order to improve the natural environment of man, to preserve it, to create conditions for the effective release of the human being from physical or intellectual constraints imposed by the man-nature relationship.

The big challenges that mankind has to face are the consequences of phenomena like natural, material and energy resource exhaustion, uncontrolled environmental pollution, population growth, with consequences on the possibilities to ensure an adequate food supply.

In this context, of a real interest because of its amplitude and effects is the monitoring and management of some processes, at the regional and global scale, with major influences upon environmental imbalance, using satellite technologies, information technologies, the amazing development of the communication capacity.

Contemporary technology cannot ensure the necessary conditions for sustainable development if it destroys the society assets the eco-sphere depends on, and at the same time demands permanent consideration for its advantages to be balanced with its ecological value.

It is about that mild technology specific to the mentioned fields, characterized by:

- Risk-free applications for human health and survival;
- Continuous renewal of the products from the constructive, functional and qualitative point of view;
- Pre-eminent utilization of the natural substances;
- Reduction of consumption of raw materials, materials, and energy.

Technology transfer for the benefit of the civil society can be activated by increasing the technology spread ratio, increasing technological substitution ratio, the frequency of applied technological innovations and decrease the temporal disparity between the innovation appearance and its application.

Technology transfer leads to the elimination or decrease of unwanted effects related to the transition from general theory to applications, elimination of the degree of uncertainty in scientific research, decrease of technology development costs, elimination by political action and intervention of specialized authorities, of objectionable aspects of physics laws application, etc.

Next, some aspects of the dual use of the teledetection and SCADA systems technology, as well as global positioning technologies using satellite technology will be analyzed.

2. Teledetection and telemetry

Teledetection, i.e., remote measuring, recording, storing, and evaluation of some parameters in dynamic evolution, has registered spectacular development with applications in the majority of man-nature relations activities: geology, agriculture and forestry, hydrology and meteorology, oceanography, geodesy and cartography, land improvement, geodynamics, and environment protection.

Teledetection has been developed in the defense field, in order to discover, identify, classify and destroy, using different spectra (e.g. infrared, visible, radar), fixed or mobile enemy targets.

Telemetry is the technique utilized to send and receive remotely data and information about the natural or anthropic environment. The data are sent to one or more locations, by phone cable, radio, microwaves, or other means. The communications methods towards certain locations, as well as the information protection procedures, are incorporated into the system.

From the brief presentation of the fields of human activity where detection can contribute in a decisive way, the tremendous interest in improving these technologies is demonstrated, an interest materialized in the developed countries in massive investments, very efficient economically and rapidly redeemable.

An important application of teledetection and telemetry is related to the management of natural and anthropic risks that, most of the time, have as effects huge material losses as a consequence the destruction of infrastructure elements, doubled by human losses.

Natural hazards such as earthquakes, volcano eruptions, hurricanes, tornados, tsunamis, floods, land slides, droughts, etc., and those provoked by human activities, e.g. chemical pollution, radioactive pollution, fires, dam damage, are inevitable and with a high rate of occurrence.

The effects of natural disasters last for a long time after the causing event occurred and, varying with the social organization and its early warning, prevention, and containment means, they can be minimized. The global population growth, excessive urbanization, environmental decay, and technical progress create new disaster vulnerabilities, the associated costs rise continuously and at an alarming rate.

The issue of mitigating disaster effects belongs to the central and local administration; they should take steps in order to rapidly and correctly analyze the teledetection information, using adequate software programs.

Specialized satellites LANSAT, SPOT, ERS, OrbView, CARTERRA type send data/images provided by the recording devices on-board using, *inter alia*, SAR type technologies (Synthetic Aperture Radar) by which relief, tridimensional, detailed and accurate maps can be realized.

Very small modifications (centimeter scale) of the information regarding terrain can be detected by the differential analysis method.

The satellite data are useful to monitor emergencies, identify the risk area, and evaluate the extent of a disaster. Full picture of the situation of large areas, with the indication of danger and affected zones can be obtained within a short time. The data collected after the disaster can be utilized to estimate the damage, for cartography purposes, and to design reconstruction and prevention plans for the future.

The image resolution of the satellites for civil application is on the order of meters in comparison with those for military application which is on the order of centimeters.

Similar to cartography, the high resolution image can provide information regarding the total and accurate inventory of the affected goods, evaluate the vulnerabilities, and determine the possibilities to assist the population: evacuation ways, accommodation, medical assistance, management of transportation means.

In land surveillance it is mandatory to use multispectral sensors which collect data in more spectral bands, from visible to infrared, as well as radar spectra, which are useful especially when there is fog, rain, or clouds.

The possibilities of capitalization of the space surveillance of the earth and the application of teledetection to solve the major problems of the human communities, and more, are apparent.

The introduction of these technologies requires high costs related to the fact that each application has its own particular software and hardware. Without entering into details, although the approach is similar, for instance, the application for flood surveillance is different from the application for monitoring forest fires, or chemical, radioactive pollution, and so on.

The high initial costs of civil applications of space technologies are paid off by major influences on the economic contribution they could have with regard to disaster warning, and decrease their number, by planning the means and long-term economic activities, urban development, land reconstruction development, monitoring environmental pollution, and location evaluation.

From the basic analysis of the material and human costs consequent to a disaster in comparison with the application of efficient warning-monitoring systems, by using teledetection technologies the economic efficiency of these systems can be inferred.

It is necessary that the entire society, including the political decision makers, be informed with regard to these aspects and the necessary procedures be ordered and adjusted by rigorous and realistic plans.

In the teledetection application case, besides the investments for producing and placing into orbit the surveillance satellites, it is necessary to have ground stations for receiving and processing the information from the satellite, equipment and communication channels, computerized technique and software programs for analyzing and interpreting the

information; investments are necessary to create an information system dedicated to teledetection information transmission previously processed at the end-users, and back-up equipment.

Despite the high initial costs, efforts should be made not only because of the huge economic benefits, but also because without these technologies our country would be lag behind other EU states which put a lot of efforts in this field. On the other hand, these systems are integrated at the regional or global level, and each state should bring its own contribution.

For monitoring emergencies, the following space, functional, teledetection, telemetry, and communication systems are successfully utilized:

- Geostationary systems (INMARSAT, EUTELSAT, INTELSAT); the facilities of communication with satellites from the system are ensured by BGAN type equipment which ensures from office services to voice communications, big folder transfers or even video conferences. The maximum transfer speed starts at 144 Kb/s and it can reach 492 Kb/s.
- Daytime orbit systems (INTERSPUTNIK, Molnia, Orbital);
- Communication satellites with low orbit (GLOBALSTAR, IRIDIUM);
- Communication satellites placed on geostationary orbits (Thuraya system).

The IRIDIUM system, for which there is a communication application in our country, too, consists of 66 interconnected satellites orbiting at a height of 800 km. The system enables any type of telephone transmission between any geographical places on the earth. The satellite launches started in the spring of 1997, and the system became operational one year later.

The Thuraya system offers GSM and GPS satellite service through a single phone terminal, dual mode and user-friendly. The phone configuration enables voice, fax, SMS, rapid data transfer services.

Thuraya was founded in the Arab Emirates in 1997 by a consortium formed of the market leaders of telecommunication operators and international investment companies. The main contractor hired to build the satellites was the American company Boeing Satellite Systems, also known as Hughes. The three satellites of the system are placed in geostationary position at about 36,000 km distance from the earth.

The first Thuraya satellite was launched on a Sea Launch Zenit – 3SL rocket, from the Equator, in the middle of the Pacific Ocean, on 21st of October, 2000. The launch broke a record too, because it was the first satellite launched from the Middle East ever, and the heaviest one ever launched.

The second satellite was launched into orbit on 10th of June, 2003, by Sea Launch which was the launching vehicle for the first satellite, too. Designed for an average life span of 12-15 years, the second satellite is positioned at 25,786 km (22,236 miles) above the earth at 44 degrees east longitude and 6.3 degrees declivity.

The third Thuraya satellite weighing 5,173 kg, was built by Boeing Satellite Systems and launched on January 15th, 2009 from the Odyssey platform at 154 West longitude, being placed into orbit by a Zenith-3SL rocket. The third satellite contributes to

the system extension of a covering capacity which now represents approximately 90% of the earth's surface.

These types of systems are recommended to be used within emergency communication nets, *inter alia* due to the reduced costs and radio visibility that is almost global.

Within the hazard monitoring operations, the Global Positioning Systems (GPS) and the Global Navigating Systems (GNNS) are very important, too.

There are two operational global positioning systems, i.e., GPS – NAVSTAR (SUA) and GLONASS–COSMOS (Russia).

Both systems are utilized to monitor air and land transportation, for time synchronization, monitoring of ecological nature, search and rescue operations.

At the European Community level, the technical activities necessary to launch the European Positioning System GALILEO are already initiated.

The elaboration of a unitary and coherent policy is required at the national level, by the legislative and executive powers, which will offer the possibility to realize and to administrate a teledetection system compatible with the existing European systems, and which will enable the capitalization of the obtained information by making them available to the private or governmental entities, and the central and local administration.

One application with tremendous economic and social implications, the urban cadastre, is worth emphasizing. Its costs can be paid off within very short time as a result of property regimen clarification, or getting the necessary approval for constructions both for rural and urban environment.

Processing the elements provided by teledetection and telemetry is made through SCADA systems (Supervising Control and Data Acquisition) which collect the information, transfer them to an analysis and control unit, and display the results on the operators' screens.

SCADA systems can be utilized to monitor and control industrial capacities or technological processes.

The control and monitoring system is distinctive for researching the information collected by sensors, and then for generating the necessary operations for each event. This system might have only one computer in its configuration, or might be a network of terminals allowing information distribution to the specific end-users.

The civil applications of teledetection and SCADA systems are very diverse especially in the energy field, fluid management (drinkable water, fuels, residual water), transportation, building monitoring, crop surveillance, environment aggression analyses, controlling the irreversible transformations of the environment, etc.

3. Global positioning System and Mobile Object Management

The Global Positioning System consists of 24 operational satellites disposed on 6 circular orbits at 20.2 km above the earth. The satellites constellation formed of 4 groups of 6 satellites makes a complete rotation above the earth every 12 hours providing positioning information.

The GPS satellites are utilized to calculate the position of a GPS receiver found on or above the earth, utilizing special algorithms which enable positioning in 3 dimensions of the receiver and its motion parameters permanently. The GPS system was completely operational starting July 17th, 1995.

The system developed by the United States Department of Defense can now be utilized by anybody. The data provided by GPS have two levels of accuracy, a standard one, SPS (Standard Positioning Service) and a precise one, PPS (Precise Positioning Service). SPS is destined to public use and its performances were decreased in comparison with PPS, in order to protect US security interests. Therefore, in the civil field, the absolute accuracy is 50 meters and can reach the order of centimeters by differential analysis.

Another positioning system, the Russian system GLONASS-COSMOS ensures a civil accuracy of 50-70 meters in horizontal plane, and 70 meters in vertical plane.

Surveillance and monitoring systems of mobile objects (SMO) present hardware and software solutions designed to locate, survey and control mobile objects (ship, vehicles, people) remotely from the central monitoring point.

Any SMO has the following components:

- Equipment installed onto monitored objects;
- Communication system between the monitoring center and the monitored objects;
- Monitoring center.

The monitoring center is equipped with devices designed to determine the geographical position of the monitored object, using the GPS system, memorizing the geographical position achieved, with a system of sensors which determines and memorize various parameters of the monitored object (the speed of the vehicle, roadside hours number, operating parameters of the thrust system, etc.); it is equipped with a processing system of the achieved or received parameters, feedback systems for controlling the monitored parameters, communication ways to various institutions interested in monitored objects surveillance.

Besides the ones mentioned above, there is the communication system with the monitoring center, which can be GSM type, radio, satellite, or combined, with the possibility to switch between different systems.

Essentially, the GPS provides information about any place on earth mentioning its coordinates. The GPS can be utilized as a navigation instrument enabling the safe movement in unmapped or insufficiently cartographed areas. Using this system we can know, at any time, the coordinates where we are anywhere on earth.

The GPS system has the capability to calculate the position of a receiver mounted on the monitored object, or somewhere on the earth surface, using simple geometric measurements and a computing algorithm which assist the receiver in determining which satellite is available for application at a certain time, and to determine the position, speed, and exact time (the reference is an atomic clock), round the clock, anywhere on earth.

The monitoring center, besides the equipment that fulfills the above mentioned tasks, also has a software program which manages all information of the system and which can display on a digital map, the position through time and space of the monitored objects,

or other information such as the deviation from a preset route, from the movement speed, emergency alarms, etc.

The main features of a SMO are:

- ✓ Determining the current location of the monitored object and memorizing this position, and representing it on a digital map;
- ✓ Surveying and memorizing the routes of the monitored objects;
- ✓ Monitoring and diagnosing different components or parameters specific to the monitored object;
- ✓ Warning the abnormal situations: deviation from the route, non-observance of the timetable, unauthorized opening of the auto- or railroad- containers;
- ✓ Remotely commanding and controlling different components or devices of the monitored object;
- ✓ Protecting the information within the system.

The potential beneficiaries of SMO systems can be the transportation companies, valuable transportation companies, security companies, emergency systems monitoring companies, companies that monitor the petrol products transportation pipes, customs and border control authorities for surveillance of the movement of vehicles for goods or passengers.

Within the operation of the periodic reporting the position of the monitored object, the SMO system can enable the end-user connected to the Internet to set up the frequency of the messages and to receive, in real time, information about the object, including specialized assistance in case of certain events during transportation.

The feedback feature of the SMO enables for road or naval transportation for instance, optimizing the speed, minimizing the time, delivery on time, etc.

An extraordinary feature of the system is its capability to follow mobile targets in case of asymmetric threats, fight against human trafficking, smuggling goods, armament, dangerous substances and hazardous materials.

The implementation of these systems enables the apparent optimization of the activities, increases their efficiency, and reduces human resources, material and financial expenses.

Transferring the cutting edge technologies to civil utilization constitutes an important way to add value to them, with reduced expenses, in order to achieve applications of high economic efficiency, in most various fields.



MARITIME STRATEGY AND NAVAL STRATEGY

Rear Admiral (ret.) Professor Marius HANGANU, PhD

A country's maritime power is closely connected to maritime strategy. If we analyze the modern meaning of the word, i.e., establishing a perspective plan to achieve a certain goal, we will see that all the components of the maritime power – navy, merchant navy, shipyards, harbors, maritime relations system – can be the object of maritime strategy.

However, if we analyze the word strategy as a part of military art thus placing ourselves in the field of military science we must admit that the old Greek concept of strategy, i.e., the art to order or the art to prepare and conduct a war, cannot be the same today. It is hard to establish war strategic purposes for one or more states which should be achieved only by one service: Navy, Air Force or Land Forces regardless of the way the armed services are presented.

While in ancient times military strategy was seen as a way to lead forces in battle and in the Middle Ages it referred to theatre operations, whereas in last century's battles it referred to the immense strategic fronts, today we use the concept of geostrategy which encompasses continents. It can be considered as a world strategy expanding and developing in the field of space strategy.

The subject we are analyzing here, maritime strategy, is still present in a certain aspect of military strategy. Moreover, we will always have to study it because military science, as any other science, deals with concrete facts in time and space.

Of the three fields of military art, tactics, operational art and strategy, tactics is specific to each of the services. The actions conducted by navy units or greater tactical units will never be the same as the land forces or air tactical actions.

Thus, the ships or ship units, when conducting operations, cannot be considered defensive or offensive as the Land Forces are. All the ships are offensive. Even those with support missions like the mine-sweepers which from morning till night must look for mines and destroy them in order to safeguard navigation for antisubmarine ships which search for submarines every day and make intense and exhausting efforts. Only at the operational level can we approach the terms offensive and defensive. But even at the level of operational art, preparing and conducting operations, the military actions of a single service is less probable. For over half a century, military operations have been imbalanced or asymmetric and the conflict areas have been criticized by the international public media

through its most authorized organization, the UN and solving the conflictual situations meant the action of a multinational force under the UN mandate.

This type of military action, multinational, gives an even greater importance to the services' wartime and peacetime missions but this will not change the armed combat's main principles. As Mahan showed in his book "Navy influence on history, 1660-1783" published in Boston in 1890, "*while many of the conditions of conducting a war vary from one age to another, depending on the development of weaponry, there are certain lessons history taught us, lessons still valid today. These can be considered principles*".

While at these two levels, tactical and operational art, we can deal with problems at the armed service level, at the strategic level it is clear that dealing with problems within services is impossible, at least at the level of military actions.

The principles of strategy are valid in any historic period. They are less influenced by the development of equipment and weaponry compared to the principles of tactics. As Mahan stated over 100 years ago: "from time to time, the tactics' superstructures must be changed and sometimes its whole structure is changed. But the old principles of strategy remain unchanged and rock solid".

Due to the amplitude the word strategy involves at many levels, it seems that the subject of naval strategy is very sensitive and theoretical in the case of a country with reduced shores like Romania.

There are enough arguments in favor of these subjects as there probably are arguments questioning the existence of the "Romanian naval strategy".

Before enumerating some of the arguments in favour of the development of this topic, we present a reason valid not only for our plead but for stimulating the courage to approach any such types of subjects. This argument consists in the necessity to develop and stimulate the theoretical part of military art and, at the same time, apply theoretical ideas in the practical activity.

Such well conducted and encouraged connection of theory with practice has beneficial effects on the institution we serve: "Romania's army".

Our theoretical subject, 'naval strategy', must be known and analyzed realistically in order to be put in practice.

The way naval strategy theory is put in practice as well as navy operations and tactics is an art more or less beautiful depending on the commanders' personality and training from all points of view.

Military art as part of military science encompasses naval art with its three levels: tactical, operational and strategic. Naval strategy, as the highest form of preparing and conducting a war, is necessary regardless of a state's maritime power.

In the past, all the studies and opinions on naval strategy had as main idea the necessity to concentrate naval forces for the decisive battle to gain control of the sea. After the Second World War, strategy underwent important changes.

The surface ships were not fighting against each other and airplanes, missiles and submarines were the main enemies. Big surface ships had as main mission to destroy land objectives, an insignificant mission in the past but predominant at the time.

The maritime strategic thinking has been developed and now using the fleets is more important in peacetime than in wartime.

For most planners of navy actions, the indirect battle with the enemy fleet has become an exception, but knowing the way naval forces are used in peacetime is much more necessary and current. Keeping the seas open for commercial traffic and protecting it against terrorism and also the possibility to apply the naval power are the two main peacetime missions the fleets have to accomplish.

We can say that maritime strategy can be defined as that part of military art which studies wars at sea and also campaigns, operations and battles in maritime theatres to achieve the objectives.

When referring to navy, we often come across the words “strategy” “maritime” and “naval”.

It appears to be no differences between the notions of “maritime strategy” and “naval strategy” or, by extension, between naval operations and maritime operations. We could say that maritime strategy refers only to the use of seas and oceans while naval strategy includes the use of rivers, channels or lakes and closed seas.

However there can be other interpretations as well. One of these can be deduced from the notion of maritime power. The connection between maritime power and maritime strategy is achieved by the state’s policy. Thus, the maritime power is first of all the fruit of the legislative and executive leadership and is necessary to establish political and economic relations on sea. In creating and developing a maritime power and in both fields the state’s policy has the decisive role, the way the leaders consider and understand the role and importance of the sea.

In literature, the expression naval strategy refers directly to the use of all forces and means including military ones in order to achieve some goals with the sea as a theatre. These goals are perceived as a result of a conflict. But, as we define maritime power not only from a military point of view, maritime strategy can also be the way to achieve the maritime power goals in peacetime. In other words, we can speak about a maritime strategy with the goal of developing the maritime power factors (mainly Navy, merchant navy, harbors, international relations) and also a naval strategy referring to the science and art of using the military maritime forces to obtain victory in a war.

The first meaning, that of maritime strategy is analyzed and applied for all states with a sea, thus for our country as well.

The second meaning – naval strategy – used especially in wartime, can be applied to countries with powerful military maritime forces. These states can achieve their political goals by a confrontation at sea applying a certain naval strategy. In other words, in this

case, military strategy finds its correspondent in the naval strategy. However, the states with less developed maritime forces cannot set political goals at sea.

We can say that the term ‘maritime strategy’ can have the meaning of training and coordinating the actions of economic, political, diplomatic and military forces in order to exploit all the country’s resources. The term ‘naval strategy’ as part of maritime strategy, establishes the actions of the military maritime fleet in relation with those of the military air and land forces. Naval strategy is an integrant part of military strategy and expresses the military strategy requirements limited to the actions of forces and means specific to military and merchant navy.

As military strategy operates with “means of strategic action”, naval strategy uses the term “naval means of strategic action” or “constitutive parts of naval strategy” or maritime strategy concepts.

The immediate purpose of naval strategy is control over the maritime space or as Geoffrey Till stated in “*Maritime strategy and nuclear age*”, “maritime strategy deals with using the sea for own interests preventing the enemies from using it for themselves”.

The naval strategy referring to ships and also the maritime strategy referring to the maritime power elements are domains which must be elaborated and known not only by those developing maritime activities but also by all involved in it.

In conclusion, studying the maritime power and naval strategy must be a constant concern for military theorists and the theories must be effective in the practical activity.



AN ANALYSIS OF “THE NATIONAL SECURITY STRATEGY OF THE RUSSIAN FEDERATION UNTIL YEAR 2020”¹

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The article presents, in a short manner, some of the most important aspects of the political, economic and cultural evolution of post-Soviet Russia, as a result of some major events that took place during the last years of the 20th century and the first decade of the 21st century, that led to designing and approving “The National Security Strategy of the Russian Federation until 2010”.

We consider that getting familiar with today’s Russian leaders’ approaches to state construction, economic and financial strengthening, enforcement of defense and domestic security that were developed within the above mentioned “Strategy” could be of interest for international security experts.

The political, economic, military and cultural evolution of the Russian Federation after the collapse of the Soviet Union has been and will be permanently in the attention of political and military specialists from all over the world and, especially of the those from the United States of America and Europe.

After the implosion produced in the aftermath of the events caused by the Fall of the Berlin Wall (November 9th, 1989) and especially of the more and more complicated internal situation in the former Soviet Union, in the early '90s fourteen member states separated and declared their independence, amounting to 130 million inhabitants out of which 24.12 million Russian ethnics, representing approximately 18.5 % of these populations (appendix 1).

Even in this situation, Russia continues to be, in spite of her loss, a homogenous country, covering ten time zones, from the Kaliningrad enclave located at the Baltic Sea, until the Sakhalin Island in the East; it is a land full of huge unpopulated areas, having enormous potential and a population of over 143 million people, out of which 15 million are Muslim.

The main political leaders of the present world, and also specialists grouped in various think-tanks associated to the relevant political military groups agree that “Russia² continues to be a power having enormous military resources, among which more than 10,000 different nuclear weapons; she is also an energetic giant, with oil reserves, which, at

¹ Document approved through the Russian Federation President’s Decree, no. 537, May 12, 2009

² Michael Stürmer, *Putin and the New Russia*, Litera Internațional Printing, Bucharest, 2009.

the present exploitation rate, can last over 30 years, natural gas being sufficient for more than 180 de years”.

Analysts recommend not to forget either the Old Russian ambiguity of historical, cultural and geopolitical nature regarding the image of Europe and Asia, or the new oscillation between the still weak elements of democracy and inevitably the strong ones of autocracy.

As far as the global issues are concerned, the world can ask, quite rightfully, whether Russia is part of an emergent multi-polar equilibrium or whether she strives to have a say – first of all a veto regarding all the issues that come up in this world, mainly in Eastern Europe, the Caucasus, the Extended Middle East and Central Asia.

There are other elements to be taken into account:

- **Can Russia** be convinced to support, except for her manifest interests, those Pan American elements that continue to be key elements for globalization, like the World Trade Organization (WTO), the World Bank, the International Monetary Fund?
- **Is Russia going to support** the remains of the world’s order after the end of the Cold War and of the nuclear bi-polar global system?
- **Is yesterday’s revolutionary power going to become** the stabilizer of the global postindustrial organization form?
- **Russia, obviously, has got** the potential to go in one or direction another, to be a stabilizing force or a stability provider. So far, the direction she is heading to is not clear. The direction she is going to choose depends, to a great extent, on the West, on her cohesion, on her art to govern and on her real capacity of understanding Russia.
- **For Today’s Europe,** it would be fatal, indeed, to be caught between a resurgent Russia and a declining American peace, and for the North Atlantic Alliance this would be an enormous difficulty.

It is not too late, yet, to hope for reconciliation between forces. There are other arguments as well – China’s rise in the Far East is a major challenge, which is true for the case of the threat of radical Islam in the Middle East, or in the form of Iran’s nuclear ambitions, or under the form of the results of terrorism.

Additionally, one has to mention the dramatic climate change and the spread – difficult to control – of the mass destruction weapons, terrorism and ungovernable countries, cyber war and organized crime.

All these aspects that haunt the world are a problem, equally great for Russia and for the Western nations as well.

At this point, it is suitable to present, briefly, the Russian Federation’s new visions regarding her **national security strategy** (Federal Law no. 537, Mai 12, 2009).

From the very beginning, we have to mention that this document is centered on Russia’s institutional construction, on economic consolidation and diversification, on social issues, on the development of science, technologies and education and less on military issues.

Main Thesis of the Strategy:

- The document states that **“the National Security Strategy of the Russian Federation until the year 2020 is an officially recognized system of strategic priorities, objectives and actions in the field of internal and foreign affairs determining the condition of national security and a sustainable development of the state from a long term perspective”**;
- **The main difference** as compared to the previous documents (1997 and 2000) consists in the fact that national security is defined as **“a condition for the protection of the individuals, of the society and of the state against internal and external perils, allowing the insurance of constitutional rights, of a dignified standard of living for the citizens, sovereignty, territorial integrity and a sustainable development of the Russian Federation, the State’s defense and security”**. All this can be achieved through the fulfillment of certain strategic priorities.
- **Five criteria are defined** for the evaluation for the state of the national security, which determines, up to a certain extent, the characteristics of the strategy as a complex approach document for the development of the State’s fields of activity, with active participation of the civil society in this respect. These are:
 - The level of unemployment;
 - The level of consume costs growth;
 - The level of the State’s internal and foreign debts;
 - The level of provision of resources for health, culture, education and science;
 - The level of annual renewal of weapons, military and special equipment and the level of provision with military and technical engineering staff.
- **This strategy confirms Russia’s intention** to enter the five world leading economies by 2020, her conceptual basis being:
 - To maintain her way of life, her national-structural identity and Russia’s territory;
 - To guarantee meeting each individual’s material needs and her people’s needs, in general;
 - To meet the social-spiritual needs without which multilateral development and identification of the personality, of the society and of the State is unconceivable.
- **This document gives importance to the „lessons learned” from the past few years, stating that Russia:**
 - has overcome the consequences of the political and socio-economic crisis of the end of the XXth century;
 - has stopped the decrease of the living standard and of the quality of life for the Russian citizens;
 - has resisted the pressure of nationalism and international A terrorism;
 - has prevented discrediting of her constitutional society;
 - has preserved her sovereignty and territorial integrity;

- has reestablished the possibilities of her competition growing possibilities and of recognition of her national interests as a key topic in international relations.
- **The strategy defines Russia's long term national interests as follows:**
 - democracy and development of the civil society, national economic completion growth;
 - ensurance of a sustainable constitutional society, territorial integrity and sovereignty of the Russian federation;
 - transformation of the Russian Federation into a world power whose activity is directed towards sustainability of strategic stability and partnership relations, under the circumstances of a multi – polar world (p.a. – an ambitious and difficult objective to reach and maintain, in the present and future dynamics of the world, especially by the emergence of new centers of political and economic power);
- **The main priorities of Russia's national security strategy are considered to be:**
 - National defense;
 - State and social security;
- **To these other priorities are added:**
 - Improvement of the quality of life of the Russian citizens by guaranteeing personal security, as well as the proper living standard;
 - Economic growth obtained, above all, through the development of a national innovation and investment system in human capital (so far the basis consisted of export of raw materials and energy) ;
 - Science, technology, education, health and culture will develop through the enforcement of the role of the State and the improvement of the state- private sector partnership;
 - Ecology of vital systems and rational use of nature sustainable through a balanced use and development of new technologies and rational reproduction of the country's natural potential;
 - Strategic stability and equal strategic partnership able to contribute to strengthening the development of the multi-polar model in the organization of the world based on Russia's active participation;
- **Foreign Policy** is oriented towards meeting the above mentioned objectives and priorities, through the following measures:
 - Russia will start from the fact that the United Nations (UN), its Security Council, are the core element of stability for the international relations system;
 - At the same time, Russia will enforce cooperation of multilateral units like "Group 8 – G8" Russia, India, China (RIC), Brazil, Russia, India and China (BRIC);
 - Russia will use the possibilities of other informal international institutions;

- **Russia's Foreign Policy Priority** remains the development of bilateral relations and multilateral cooperation with the member states of the Confederation of Independent States (CIS).
- **The Strategy mentions the negative world tendencies that may influence Russia's security:**
 - Probable relapse of unilateral force approaches in international relations, contradictions between the main participants in the world politics;
 - Dangerous spread of WMDs and their getting in terrorists' hands, as well as improvement of illegal forms of activities in the cybernetic, biologic and high technology fields;
 - High computer technology conflagration;
 - Threats against the stability of emerging and developed countries;
 - Development of nationalist tendencies, of xenophobia, separatism and extremism by force, including religious socialist slogans;
 - Tense demographic situation at world level and environmental problems (uncontrolled and illegal migration, drugs, human trafficking, other forms of international organized crime);
 - Pandemic diseases due to unknown viruses;
 - Increasing water deficit.
- **The Strategy states that the global negative tendencies mentioned above are the source of a complex threatening system for Russia's national security:**
 - **In the military field:**
 - **The policies of some foreign leading nations** directed towards obtaining supremacy, first of all strategic nuclear forces, through the development of high precision means, informative and of high technological level for carrying out armed combat; **Development of strategic weapons** for nuclear procurement, of unilateral creation of a missile defense system and of militarization of the proximate outer space, capable to lead to a new arms race; the spread of nuclear, chemical, biological technology to produce weapons of mass destruction.
 - **In the state and social security field:**
 - **Intelligence activity** and other secret services and special organizations' activities of foreign states as well as of those of the individuals oriented towards causing prejudice to the Russian Federation;
 - **Activity of terrorist organizations**, groups and individuals directed towards changing the constitutional basis of the Russian Federation, disrupting the normal operation of the state institutions and organizations, destruction of the military and industrial objectives, of the enterprises and institutions ensuring the vital activity of the society;
 - **Intimidation** of the population;

- **Extremist activity** of nationalist, religious, ethnic organizations and of other organizations and structures oriented to destroying the territorial unity and integrity of the Russian Federation, to destabilizing the political and social situation in the country;

▪ **In the economic field:**

- Sticking to the **raw material export** model for the development of the national economy;
- High dependence on the external economic situation, losing control on the national resources;
- Deterioration of the condition of raw materials for the energetic industry;
- Uneven regional development, law stability and insufficient protection of the national financial system;
- Maintaining the conditions necessary for corruption and dilapidation in the financial system as well as migration of capital;
- Crisis in the financial banking system at global and regional level;
- Increase of competition in the fight for shortage of raw materials, water and food;
- Backwardness in the development of high technologies;
- High strategic risk due to a too high dependency on changing the external environment.

- **In the field of science, technologies and education:**

- Backwardness in changing technologies, dependency on imported equipment, devices and basic electronic components, strategic materials;
- Unsanctioned transfer over the borders of indigenous technologies to foreign competitors;
- Unilateral abusive sanctions in the relations between scientific and educational organizations and Russia;
- Insufficient development of the legal normative basis and weak motivation in the field of innovation and industrial politics;
- The low level of social protection of the technicians, engineers, teachers and professors and their reduced number affecting the main stream and superior educational system;

▪ **In the field of health:**

- Emergence of epidemic and pandemic diseases at large scale, mass spread of HIV infection, tuberculosis, of tobacco and alcohol addiction.
- Reduced efficacy, insufficient level of medical insurances and of medical staff income, low financing level for the

development of a superior medical system, unfinished health legislation aiming at increasing access of the population to medical services

▪**In the field of culture:**

- Influence of mass culture production oriented towards marginal strata needs;

▪**In the field of ecology:**

- Sticking to the production of an important number of dangerous products whose activity leads to the destruction of the ecologic equilibrium;
- Ignoring the legal provisions and monitoring;
- Depletion of the country's mineral raw materials, reduction of mineral resources of strategic importance;
- In the elaborated and approved strategy, **the Russian Federation**, considers a **negative influence against the international situation** on a medium term perspective can be caused by:
 - The situation in Iraq and Afghanistan;
 - The conflicts in the Near and Middle East;
 - Certain conflicts in South Asia and Africa, in the Korean peninsula;
 - The critical situation of depositing dangerous wastes and objects, especially in countries having an unstable political situation;
 - Uncontrolled spread of ordinary weapons by the state;
 - The possibility of solving certain situations created by the concrete fight for raw materials using military force, that leads to destroying the force equilibrium near the Russian Federation borders and of the borders of her allies.
 - The risk of increasing the number of countries detaining nuclear weapons;
 - NATO's plans of extending NATO's military infrastructure towards Russia's borders and their attempts of granting them global operations that are not in contradiction with the international legislation in force.

For the first time, **in the presented document**, the role of the civil society in carrying out the thesis of the strategy is stressed out; it is mentioned that insurance of national security consists in maintaining the legal and institutional mechanisms, as well as the possibilities in point of resources of the state and of the society at a level that meets the **Russian Federation's national interests**.

It is assessed that the state of the Russian Federation's national security depends directly on the country's economic potential and on the efficacy of the functioning of the national security insurance system.

In the final part, the document defines the legal normative and information basis for the realization of a real strategy. Respectively, it is underlined that „realization of a real strategy is insured based on the consolidation of the efforts and resources of the organs of the state power, of the civil society institutions, oriented towards the protection of the Russian Federation’s national interests by the complete use of all the political, organizational, social-economical, legal, special and any other measures elaborated within Russia’s strategic planning”.

The Russian Federation must become the mobilizing factor for the development of the national economy, improvement of the population’s quality of life, enforcement of the national defense, of the legal and state security, increase of the competition capacity and of Russia’s international prestige. I consider that a careful study of the Strategy by interested Romanian specialists can shape an answer to the question: to what extent is Russia heading irreversibly towards the political behavior of a modern democratic state and how predictable will be her actions in the international arena in the future years?

RUSSIAN ETHNICS IN STATES SEPARATED FROM THE USSR³

No.	Country	Total of population - millions -	Out of which Russian ethnics	
			%	In figures - millions -
1	Kazakhstan	16,9	37,0	6,253
2	Kyrgyzstan	4,5	21,5	0,967
3	Tajikistan	5,7	3,5	0,200
4	Uzbekistan	5,7	8,3	0,473
5	Turkmenistan	5,7	8,3	0,473
6	Azerbaijan	7,4	5,6	0,414
7	Armenia	3,7	2,0	0,074
8	Moldova	4,4	13,0	0,572

³ Source: **Michael STÜRMER**, *Putin and the New Russia*, Litera Internațional Printing House, Bucharest, 2009, (p. 6)

No.	Country	Total of population - millions -	Out of which Russian ethnics	
			%	In figures - millions -
9	Ukraine	52,1	22,0	11,462
10	Belarus	10,4	13,2	1,403
11	Lithuania	3,8	8,6	0,327
12	Latvia	2,7	33,8	0,913
13	Estonia	1,6	30,3	0,485
14	Georgia	5,4	2,0	0,108
TOTAL		130	18,55	24,124

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THE MILITARY STRATEGY AND OTHER TYPES OF STRATEGIES

Colonel (ret.) Professor Eugen SITEANU, PhD

The military strategy enrolls a major political decision regarding the use of military forces, means, resources and actions not only for enforcing its own will over the adversary but also for accomplishing some security and defense-related aims and objectives and other goals than the ones coming strictly from the war phenomenon.

Strategy generally represents the science, the art, the experience and the means to shape a political decision, and also to harmonize the estimated effects of certain actions with the axiological dimensions of the political-military factor. It results that the military strategy is the science, art, experience and means to put into practice a political decision regarding the composition, training and means assigned for war and the armed conflict, and also the means of military expertise is done for the political decision maker.

Thus, the European Security and Defense Policy (ESDP) has not reached yet its final form, and is still undergoing a complex process of evolution in order to elaborate a continuous and structured cooperation in what concerns the EU security and defense. The Romanian strategy of independence and unity chose and implemented the most suitable forms of actions: the alliance with one great power to counterbalance the strength of the other. So did Michael the Brave by his political strategy of unifying and centralizing the Romanian state, and his political-military plan materialized in 1599-1600.

Strategy appeared first in the military field, in ancient times, and was transmitted by oral tradition. The first strategy theorist, who left us a written work, is Sun Tzu, who lived in China in the 4th century B.C. In Ancient Greece, Thucydides defined strategy as: an elaborated art of the war and a perfect understanding of the relationship between the political and the military man¹.

At the end of the 19th century, Jung referred to the civil strategy, and Dupuis promoted the ideas of integral strategy, that could control the three types of strategies: military, governmental and diplomatic².

Limited to small political-military fields, strategy has become today a science studied within the military education, i.e., **the scientific strategy**. Strategy is both an art

¹ Hervé COUTAU-BEGARIE, *Breviar de strategie*, Editura SITECH, Craiova, 2002, p.6

² *Idem*, p.7.

and a practical strategy and a science, as theoretical teaching, because in the military, as in other fields, there is the military theory and the military practice. In fact, every part, every level of the military field has this dual aspect, theoretical and practical, because any practical activity is based on laws, principles, methods and theoretical methods and, in its turn, theory results from practice.

In ancient times, strategy expressed the functions of the general, the qualities of the general and the art of an army leader or, generally, the art of leading, but strategy was not limited only to the fight and was not static at all, but directly linked to maneuver.

The Chinese strategy represents a concept (owned by Sun Tzu) equivalent to the one of the Greek and Roman world, but more extensive, which the contemporary translators render simply by the term 'strategy'. But, in reality, the notion is larger and can be expressed by military methods and even by the art of war. Sun Tzu's famous treaty shows methods and was meant for those who were leading one or more armies or a campaign, which clearly is the resort of strategy. At the same time, theorists have expressed quite clearly the relationship between war and politics, referring to the idea that a king could expand his territory only by war and thus become the master of the world or, on the contrary, if some territory were lost he would lose his power. In ancient times there were no examples of ancient kings who had become masters of the world without victory in war, nor of kings who had lost their powers without being defeated. The art of kingship (Shu), expresses all the techniques that allow to preserve power and to govern the country, including leadership of military operations in an extremely wide vision, closer to the contemporary orientation of the strategic studies: "*The battles represent only a fifth part in the importance of war*".³

Although in the ancient China we do not find the perfect equivalent for the word strategy, because the categories of the Chinese thinking are different from those of the Western one, the concept exists (i.e., general arts, training plans, situation analysis, method) and is not only put into practice, but also theorized in the writings we inherited.

The classical definitions of military strategy are based on the emergence of leading the operations and which fall into two broad categories: the strategy as an art or the science of strategy. Thus, strategy is defined as the science of war, which elaborates plans, creates an overall vision and influences the military actions being considered "the science of generals-commanders". The General's Art, respectively strategy, is a noble activity, reserved for those who have reached a high level of responsibility and belongs to both military practice and theory. As shown previously, any practical activity is led by taking into consideration the laws, principles, methods and procedures established by a theory like the military one which, in its turn, learns from the military practice, by continuous nurturing⁴.

³ **Hervé COUTAU-BEGARIE**, « *Tratat de strategie* », Vol. I: *Strategie generala*, Editura U.N.Ap. "Carol I", București, 2006, p.44

⁴ **Benone ANDRONIC, Eugen SITEANU**, *Schimbări și tendințe în strategia militară și arta operativă*, Editura Universității Naționale de Apărare, București, 2005, p.13

The Military Strategy and other Types of Strategies

The bases of the military science, strategy and tactics have been built by famous authors, such as Jomini, Lloyd, Bulow and Carl von Clausewitz who defines tactics and strategy as follows: "*tactics is the theory of using the armed forces is the strategy is the theory of using the fighting to achieve the purpose of war*"⁵.

In some schools, the war strategy is known as general or global strategy (grand strategy) and the strategy of the armed combat is called by some authors 'the little strategy'. Other schools, among them the French one, identify the grand strategy with the general strategy of the state or, in more modern terms, with the *national security strategy*.

So, military strategy contains the war strategy and the strategy of the armed combat, but has at the same time a practical-applicative character.

As to the Romanians, in the Middle Ages, chroniclers such as Grigore Ureche and Nicolae Costin and the scientist Dimitrie Cantemir wrote about the military strategy and some of its principles, e.g. the possibility of saving their own army, in case the enemy outnumbered own forces, by executing some skillful maneuvers by forces and means and indirect actions, and by concluding an alliance with one or another of the great powers in order to counter the hostile power of other big states. Throughout the Romanian military history we can find many aspects of the application of strategy in the difficult wars that our forefathers have fought under the leadership of great strategists. Thus, the political strategy for unification of the Romanian provinces of the Roman central state was materialized in a brilliant way by the great ruler and military commander Michael the Brave in the years 1599-1600.

Two centuries later, Jomini, in his paper *Precis the l'art de la guerre*, published in 1839, believes that *strategy is the art of war going on the map and including the entire theater of war*. In his work, *On War* (1832), Clausewitz proposes an original definition: "*Strategy is the theory referring to the use of fighting in war service*", which is centered on the battle, the most important moment of the war. This is because Clausewitz the theorist considered that "*the destruction of the enemy forces is always the most effective and higher means, to which all the others must be subdued*"⁶.

Around World War I, some strategists still thought that *strategy is the art of commanding armies*. However, they had reached consensus regarding the concept of **strategy**, namely that **it is military, both a science and an art and refers to leadership in war time**.

It is normal that each country has its own military strategy, but today there is not only military strategy but many other strategies: i.e., political, diplomatic, economic, financial, cultural, educational, naval, security, strategies to combat corruption, etc. So, military strategy is at the origin of all policies and comes in relationship with them. A first expansion stage of the concept appeared in the late nineteenth century in France, about the political strategy, diplomatic strategy and military strategy, controlled by an "integrated

⁵ E. BADALAN, V. ARSENIIE, D. ALEXIU, *Tratat de tactică militară: fortele terestre*, Editura Academia Fortelor Terestre

⁶ Carl von CLAUSEWITZ, *Despre razboi*, p.13

strategist⁷". A similar evolution also occurs in Germany and USA. In the early twentieth century, strategy is defined as "the art of leading the force to the goals to reach⁸", which means transcending the term strategy from the military field to the one of strength and beginning the competition between strategy and politics.

In the second phase of its expansion, strategy went to the non-military fields, and the non-military strategies appeared. Transgressing the military area meant questioning the meaning given to strategy in the 19th century when the term strategy was used in the civil field only in a figurative sense. After the First World War, the definition and wide usage of the concept of economic strategy started because the economic mobilization of belligerent States' economy was needed, which led to the recognition of non-military dimensions of strategy. This idea first appeared in the USSR in 1920, where Frunze, who became marshal, did not make any difference between peace and war, developing a new military science, which concentrates all the forces in one unique direction, based on the unique assembly: military strategy, political and economic strategy⁹. Also, the Soviets introduced two new concepts: the integral strategy and the integral strategic.

After 1920, Liddell Hart elaborates the grand strategy, which aimed to quantify (assess) and provide (develop) the economic products and demographic resources of the state to support its military power, not only during wartime but in peacetime too, and Admiral Castex writes about the general strategy as the art of leading the system of forces and combat means of a State, both in war and in peacetime. In the latter's view, the general strategy was meant to coordinate specific strategies (political, naval, land, air, economic strategy, etc.). He is among those who sustained that besides military strategy there are other strategies such as, for example, the political one. Recently, there have appeared all kinds of military strategies such as, for example, operational strategies, strategies of military intervention, strategies of army transformation, which was also found in our country¹⁰ (the transformation strategy of the Romanian Military) and security strategies (the European Security Strategy); the classifications of military strategies are done from different points of view: e.g. politically, according to the environment in which the military actions are done, the duration of the actions, the nature of forces (assets and shares), etc., talking about: the national military strategy, the alliance strategy, the partnership strategy, the coalition strategy, the military land strategy, the military air strategy, the military naval strategy, the space military strategy, the strategy of joint type, the integrated military strategy, the military pre-conflict strategy, the crisis strategy, the war strategy (the battle), the post-conflict strategy, the military strategy of deterrence, of collaboration, of threat, of conflict, the classic military strategy (conventional), the nuclear strategy, the nonsymmetric strategy, the asymmetric strategy, and about other types of strategies. Other theorists

⁷ **Hervé COUTAU-BEGARIE**, *Tratat de strategie*, Vol. I: *Strategie generala*, Editura U.N.Ap. "Carol I", București, 2006, p.53

⁸ *Ibidem*, p.54

⁹ **Hervé COUTAU-BEGARIE**, *Tratat de strategie*, Vol. I: *Strategie generala*, Editura U.N.Ap. "Carol I", București, 2006, p.54

¹⁰ Amiral Castex, *Theories strategiques*, III, p.52

proposed, after 1920, the concepts of total strategy and later the global strategy, respectively the national strategy.

In the third stage, strategy was generalized and put apart from the sphere of the state and conflict, because it started to be applied in any social activity. Thus, the strategy of enterprise appears after 1950 in the USA, in response to the policy of enterprise which Fayol and Taylor had written about. Starting from these reasons, strategy became the sum total of coherent actions/operations, unitary and judiciously/judiciably coordinated, as well as of the maneuvers adopted to reach a certain aim.

It seems there exists at least one strategy for each domain. Although it seems an exaggeration, we frequently speak about strategies in information, communication, tourism and even in football, handball, gymnastics, even in the daily activity of each human being. There are strategies even in logistics, in acquisitions, in the management of the human resources, in international relations, in the durable development, in (scientific) research, in security, marketing strategies, governmental strategies as, for instance, anticorruption strategies or for preventing and fighting against corruption, strategies for developing education, strategies for developing underprivileged areas, national strategies in the domain of health, the strategy of the government regarding the reform of the public administration, the strategy of the government regarding the computerization of the public administration, the strategy of the government regarding the development of the public services, the strategy of the government regarding the protection of the children in difficulty, the strategy of the government regarding improvement of the situation of the Roma, etc. In any profession, activity or any action we can notice that we have a certain strategy because everybody started to claim that they have their strategy and it becomes harder and harder to contradict them. This concept of “strategy“ has “distended” and “diluted” and as a consequence it does not have the initial content anymore, because there are now very many manners of perceiving the term “strategy”. That is why we ask ourselves if such strategies are real/true or the concept has long exceeded its normal/rational limits.

As we will demonstrate in what follows, it is neither correct nor normal that the security strategy of a nation be the strategy of the government, but that of the Parliament, because only the Parliament would represent the public opinion and even the entire people or the whole nation. The national security strategy is often confused with the security strategy of the state and that is why we opt for the collocation “the security strategy of the nation” because it should be understood that this strategy has as objective the security of the whole nation. There have been numerous cases in the world history when states and nations disappeared, as Poland, not only once, but several times, however the Polish nation did not die and managed each time to rebuild the Polish state, which means the nation is more important than the state regarding the elaboration of the security strategy of a nation.

The security strategy of the nation is at the interface between the political and strategic domain and has the role of achieving the political-military and strategic harmonization of these domains and of concentrating the security effort of all domains and components, national structures in European and international context from different perspectives.

Strategy has become a universal term and we cannot live without strategy, the same as we cannot live without politics, because there is no strategy without politics¹¹, because before any strategy there is a political decision. As a rule, those who make the decision also choose the strategy of applying it (the decision), which does not seem fair, nor logical to us, because only the expert in strategy is properly trained to elaborate the strategy of accomplishing a political decision. Consequently, decision-makers also choose the strategy of applying the political decision and by strategy they understand a medium or long term project of organizing the activities of implementing the decision. Others understand by strategy the art of convincing and influencing communities/people, or even that of cheating or manipulating them¹².

The result is that some define strategy as the science and art of planning and organizing the activities of realizing the medium or long term decision. Actually, some of the authors¹³ consider (define) strategy as the science and art of the political decision factor “serving the total war”.

It is imposed that each organization elaborate its strategies. For the international organizations this became a top priority and can be illustrated by numerous examples: the Strategy of the NATO transformation, the European Security and Defense Policy, the Strategic Concept of the Alliance, etc.

Military strategy puts into operation a major political decision regarding using the military forces, means, resources and actions not only for imposing its own will on the opponent and for realizing some aims and objectives from the domain of security and defense, but also for other aims than those which account for the war phenomenon.

The policy without strategy, without strategic expertise, is like a body without its central nervous system, it was proven, demonstrated by the confrontations since the oldest times until today, such as, for example, the experience of the wars in Spain (the invasion of the armies of general Napoleon Bonaparte – the emperor of France), Vietnam and Korea (the aggression wars of the USA against the two states).

The Vietnam war, started in 1964 by the USA against North Vietnam, took place in the jungle, in order to defeat the Vietnamese resistance. This guerilla war ended with the victory of the Vietnamese resistance forces which managed to unite the country under the name of the Socialist Republic of Vietnam in 1976. In this war the two parties had totally different strategies: the Americans chased to the vital centers which were not vital at all, and the destruction of the guerilla forces, and the guerilla strategy had the aim to erode the American forces, to attract them into the jungle, to exhaust and decimate them, to lengthen the war in order to determine the USA to put an end to it and to withdraw their forces on basis of the aid of the world public opinion. The Vietnam war was insufficiently prepared by the Americans, either from a political point of view, or a strategic one. After this war the Americans defined by law the responsibilities of the political and military factors in

¹¹ Eugen BĂDĂLAN, Valentin ARSENIU, Gheorghe VĂDUVA, *Strategia militară contemporană*, Editura CTEA, București, 2006, p.24

¹² *Ibidem*

¹³ Hervé COUTAU-BEGARIE, *Op.Cit.*, p.56

preparing the troops, in order to fulfill the politically, media and financially sustained missions, and planned in detail, with minimum losses. North Vietnam used the strategy of resistance to invasion, which was also adopted by the Afghan guerilla forces against the Soviet troops on December 27th 1979. In Afghanistan, the Soviet troops occupied the important cities and the plains, but the Mujahideens hid in the mountains and harassed the invasion forces continuously. The Soviets were forced to retreat with a lot of losses in 1989, under the pressure of the international public opinion.

The strategist must never lose sight of the fact that nature and the world are domains with a multitude of events, which issue out of a complex dynamics, and perceive that although he knows a lot, he knows too little, because the more knowledge and information he acumulates, these, as well as knowledge, need to grow. The strategist always thinks at the interference between politics and action as a designer, planner and organizer of the action. As a consequence, without a well designed strategy, the political decision cannot be put into operation, because the action would be incoherent and inefficient, and the results would be inadequate.

Strategy represents, generally, both science, art, experience and the way of putting in operation a political decision, as well as the harmonization of the effects estimated of some actions with axiological dimensions of the political-military factor.

The result is that military strategy is the science, art, experience and way of putting into operation a political decision regarding the composition, preparedness and using of the forces and means destined to war and armed fight, as well as a way of military expertise for the political decider. It has principles, norms and rules, out of which some have been left unchanged for centuries or even millenniums, and others adapted to the new conditions proving flexibility, always enriching the theory, respectively the science of strategy. Therefore, the strategy is dynamic, flexible, complying to the laws of Hegel's dialectics and permanently adapting to the evolution of the globalizing process, of politics and information, of economy and culture and, of course, to the evolution and revolution of the arms systems. It also adapts to the Revolution in the military domain and to the network-based War which imposes the reconstruction of space and especially of the strategic time. Yet, the great coordinates of strategy remained unchanged. But the new strategic space and the new strategic time determined not only the emergence of a new philosophy of military maneuver and transformation, but also an obvious tendency for asserting the unity and ubiquity of strategy and, as a consequence, to its integrality. And all this results naturally from the unity of human action, from the philosophical unity in diversity, according to the universal connection of the objects and phenomena and from the high degree of integrality of the systems and structures of the human society¹⁴.

Changes resembling those of mathematics when the non-Euclidian geometry appeared are occurring in the 21st century strategy. It did not deny the old (Euclidian) geometry, although the latter referred to an ideal space which exists in our proximity and

¹⁴ **Eugen BĂDĂLAN, Valentin ARSENIÉ, Gheorghe VĂDUVA**, *Eseu despre arta strategică*, Editura Militară, București, 2005, p.10

was valid only in a limited space and not the interstellar or intergalactic one, which is the real space.

The same happened in the case of strategy. Although it still is the way of realizing/accomplishing the political decision, and also the science, art, experience and ability to put into equation a certain dialectics of wills of the confronting parts, in our century it has expanded to all domains in which a conflict exists. Although the scope and content of strategy have evolved and developed, it has remained the same practical science, art and experience of putting a political decision in operation, of building a dialectics of will which confronts itself, of building and destroying, of operating with the unpredictable, with uncertainties, starting from a few certainties, of harmoniously building and of destroying the will of the opponent part in order to defeat using the most adequate means, the most effective and the most efficient ones.

In this way the European Security and Defense Policy (ESDP) has reached the final form and therefore is still undergoing a complex process of evolution which has the aim of developing a continuous and structured cooperation regarding the security and defense of the EU.

The expert uses strategy with rigor and flexibility in order to organize, fulfill and accomplish the objective set by the political factor. In order to do this the strategic expertise has to be designed by findings and retrievals of wise and therefore ingenious connections and determinations, which should ensure the accomplishment of the political decision, or which come with scientific arguments for correcting the decision.

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Trends of National Security and European Security Paradigms

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Studies upon the international and national techniques of security strategies inevitably lead to ascertaining their high complexity characterized by dynamism and permanent changes. Throughout history, security strategies have evolved in terms of doctrine and configuration of forces aiming to impose a certain state of security generated by the political aspects at the moment which makes it difficult to systematize and to show the importance of the theoretical phenomenon. In our case we consider that the history of national and international security strategies is based on 3 important patterns: „alone against all”, „us against the others” and „guarantee of peaceful co-existence based on generally accepted principles”. Unlike the contents of past security strategies, that are history today, the security strategy pattern called “guarantee of peaceful co-existence based on generally accepted principles” builds itself on developing the following pillars: limited intervention of military forces in international relations, focus of the public opinion and international institutions upon conflict prevention and crisis management, geographical expansion of the areas with high security level by political, economic and military commitment of those countries, developing cooperation between those areas and areas beyond, developing the open society principles based on political pluralism and market economy in all areas, developing and introducing non-military strategies to promote interests based on generally accepted principles, maintaining a military structure that can impose and assign the generally accepted security rules.

Key words: *paradigm, strategy paradigm, security strategy, national security, security area, international relations, national interests, global interests, military activities, non-military activities.*

The paradigm, as the basic concept of Thomas Kuhn’ s revolutionary scientific theories, designates either basic elements of a knowledge system, that is a scientific achievement universally recognized at a certain moment in time, including laws, theories, applied theories, instrumental preferences, working hypotheses, philosophical and methodological assumptions; this theoretical framework represents a commonly accepted source of research issues and procedures, solutions, and solution-appraisal criteria, or a

model, a prototype or philosophical or scientific system that guides thinking along predetermined directions, often inappropriate¹.

Basically, the term „paradigm” comes from the Greek word *paradigma*: a pattern or a map to understand and explain aspects of reality. A person can make small improvements thus developing new skills by making significant progress, fulfillment of tasks and technologically revolutionary progress requires new maps, new paradigms, new ways of thinking and viewing the world².”

The study of the national and global security mechanisms inevitably leads to realizing their overwhelming complexity, characterized by dynamism and continuous change. Historically, security strategies have changed in their doctrines and in their power configuration, designed in such a way as to impose a certain security status, generated by political options at a certain time which makes difficult any attempt to theoretically structure and essentialize the phenomena. From our point of view, the history of the national and global security strategy results from three crucial paradigms of the security strategy: the paradigm of ”alone against all”, the paradigm of „us against the others” and the paradigm of the „guarantee of peaceful life based on generally accepted principles”.

The security strategy paradigm of „alone against all”. Its basic view is that insecurity is a universal feature of human beings, social groups and states, generated by the anarchic nature of the human being. Consequently, each socially organized entity feels continuously threatened by other forms of organization; the supreme protection of its identity and social existence will be an appropriate defence strategy.

The theoretical matrix explaining this paradigm originates since the beginning of human development and became meaningful at the end of the 19th century when the security strategy philosophy was structured in terms of concepts like power, force, national interest while international relations were being built, preserved and changed according to manifestations of the military power.

Since intra-organisations and inter-state relations were based on principles of power, war was accepted as a strategic means to guarantee individual and collective security. Since the wars of the Ancient Times until the wars of the late 19th century, military actions were based on and justified by strategies to discourage and defeat enemies in order to control land, locally and regionally, as far as possible, through coercion and submission.

Scientific discoveries applied in the military field allowed significant changes in the army deployment and concentration capabilities, and weaponry efficacy which resulted into questioning the strategy to implement successful military actions against all. In practice, the end of Napoleon Wars mean the beginning of a new security strategy paradigm in which states join according to power concentration in order to better respond potential aggressions.

¹ Thomas KHUN, *Social Theory and Social Structure*, 1962; Cătălin ZAMFIR, Lazăr VLĂSCEANU, *Sociology Dictionary*, Babel Publishing House, Bucharest, 1993, p.420

² Stephen R. COVEY, *Ethics of the efficient leader or Management based on principles*, Alfa Publishing House, Buchaest, 2000, p.61

The security strategy paradigm of „us against all”. The two World Wars and the global mutual threat status typical of the „Cold War” are the new security strategy paradigm in which groups of states animated by mutual political interests build group security strategies in order to impose their will upon international relations.

Politically, international politics approached through group strategies principles reached its climax during the bipolar world system which divided countries into two camps, more or less, but nevertheless committed to undermine the security strategy of the opposite party. Competition between super-powers, especially ideological and military, marked by the nuclear blockage, reinforced the dependency relations of the small and average countries upon groups of powers. The two big political and military groups of powers were followed by countries that were neutral and non-partisan and politically unstable that could reach any time one of the two competitor groups of countries.

The military risks of the security strategy from the point of view of the competition for power during the bipolar times were connected to the arms race. Between 1966 -1999, military expenditure increased 70%, from 568 billion dollars to 950 billion dollars³. Unfortunately, the arms race stays high nowadays and it generates a surplus of military power for some states and lower security level for countries that do not possess resources to modernize their military potential.

The bipolar world paradigm of the security strategy led in practice the European security system to a potential disruption. The uncontrolled and bipolar conflict world security paradigm led to a serious difference between the states across the world, including the Euro-Atlantic area, in terms of their capabilities to ensure security and political decision freedom. At the same time, accumulation of nuclear weaponry having a destructive power impossible to justify deepened the discrepancies between states after the bipolar era. The highly destructive effects of the weapons of mass destruction, achieved as a result of qualitative research in the field, leave no hope to any state that it could stay invulnerable to these weapons, should a major conflict arise.

In the bipolar world, superpowers and other countries possessing nuclear weapons had a certain rationale justifying the existence of the nuclear weaponry that was given by the balance of powers. Given this context, non-nuclear states had to harmonize themselves to the politics of this group of powers and to the logics of confrontation between groups of powers, without having the guarantee that the leaders of the groups of powers would commit themselves at any risk, including the nuclear risk, to defend their partners' interests. Other states, remained outside of the bipolar conflict matrix for various reasons, developed political concepts and military strategies meant to ensure somehow independently but partially any problems arising where aggressions may take place from now on; these countries and all other countries that belong to the groups of powers but have no nuclear weapons have no other option but to be victims of any potential nuclear threat. Hence, the group defence paradigm, even belonging to groups of powers, requires a new definition, that is a new security strategy paradigm.

³ From SIPRI Yearbook, 1991, p.XXXVII

Given the inter-state dependencies, any armed conflict arisen will cause huge problems for the entire community as a result of commercial relations of third parties, in areas devastated by the conflict, blocked or seriously affected; transportation, supplies and logistical flows disrupted; population displacement because of the war; consequences of potential economic embargo upon countries in the area, if not beyond a.s.o.; international community, seen as an integrated system, will accept with difficulty the price of conflicts, even if only arisen at the farthest point of peripheral regions.

Currently, in the post Cold War era, the theory and the practice of the national security strategy paradigm and of the group paradigm, postulating that interests of these countries are above any other interests of international relations, while the military force and power were seen as the main arguments in fulfilling foreign policy goals, no longer give the expected results.

The limits of the security strategy paradigm focused on national interest or on group interest appear more obvious during the restructuring of the global and European system characterized by disappearance of the main elements that led to the bipolar world. Although national interest stays primordial, promoting it is increasingly done through methods that are generally accepted, and permissive to cooperation of collaboration. Geopolitics preserves its theoretical principles and imposes their enforcement by increasingly replacing the military instruments with non-military means. In various places worldwide, more and more people „ apparently agree that commerce gradually replaces military means – the available capital instead of fire power, civil innovation instead of technical and military innovation, market penetration instead of conquering garrisons and bases”⁴, which causes humankind to move towards a new paradigm of global security strategy.

Paradigm of the „guarantee of peaceful life based on generally accepted principles”. Since the military means exhausted their operational capability of tools to promote international relations interests to a large extent, in the traditional way to threaten and use force, the new paradigm of international security strategy that guarantees peaceful life based on generally accepted principles tends to gain progressive importance. At the same time, the irrelevant non-military means of low-potential states and the religious matrixes of some states maintain a residual link to the paradigm of national interest security strategy or group interest security strategy. Actually, the list including risks posed to national and global security reflect the still-existing diversity of military threats and justifies the importance of armed forces, reasonably sized and very efficient, in order to ensure peaceful co-existence and to discourage potential non-conventional risks like domestic subversions, terrorism, drug and illegal substances –trafficking, inter-ethnic conflicts, religious conflicts etc.

Although there is no comprehensive scientific theory available, the new paradigm of global security strategy closely follows the contemporary globalization trends of the

⁴ Edward N. LUTTWAK, *From Geopolitics to Geo – Economics, Logic of Conflict, Grammar of Commerce*, in „*The National Interest*”, 1990, p.20

main social, economic and political activities, causing integration of national interests into regional and global interests.

Unlike older security strategies that are currently history, the paradigm of security strategy through guarantees of peaceful co-existence based on generally accepted principles builds itself on the following pillars: limited chances for direct intervention of military forces in international relations; focus of public opinion and international bodies on conflict prevention and crisis management; geographical expansion of high security areas through political, economic and military integration of the countries thereof; development and diversification of multilateral cooperation of regional entities among themselves and with other areas beyond; generalized profusion across areas of the open society requirements, based on political pluralism and market economy; development and enforcement of non-military strategies to promote interests based on generally accepted principles; maintaining a military component able to preserve and impose generally accepted security principles.

Changing priorities in the use, by states, of means that achieve political goals is a process occurring both with powerful countries and countries with a less comparable military power because of the destructive consequences triggered by armed conflicts. Arms control or arms race control represents the set of political, diplomatic and specific military efforts made to negotiate, enforce and monitor the implementation of multilateral agreements whose goal is, on the one hand, to quantitatively reduce the weaponry possessed by states and to forbid certain types of weapons, and, on the other hand, to stimulate and manage increased trust among states.

Generally, crisis prevention tends to include, in a separate matrix, under formation, a set of attitudes and behaviours of global actors whose overall purpose is to strengthen peace through measures prior to conversions of a crisis into open conflict as a successive deterioration of global context⁵. Crisis prevention requires political, diplomatic, military, economic, humanitarian, etc measures that should be anticipative, identifying and reducing tensions that can degenerate in a certain area; diplomatic techniques should be predominant.

In the past, all geographic areas were characterized by lord-vassal relations and policies that maintained recognition of first- power-and-strength statutes. Thus, „ It is not surprising that states based on these principles wanted to be recognized as such by other states; a process that found its logic in the fact that one nation ended by ensuring its global dominance”⁶. A peaceful behaviour in international relations is ensured by the following factors: enhanced globalised economic, informational and cultural relations; enhanced control of the public opinion over governmental policies; cultural and educational progress leading to increased rational behaviour of the people etc. Nevertheless, interests to develop the market economy, based on pluralist democracy in Europe can only result into enhanced European security and strengthened peaceful co-existence of the countries in the area.

⁵ **Jenonne WALKER**, *Security and Arms Control In Post – Confrontation Europe*, Oxford University Press, 1994, p.127 - 148

⁶ **Francis FUKUYAMA**, *Democratization and International Security*, in *Adelphi Papers* nr 266, 1991, p.18

The expansion of the security area according to a West European model is currently underway and it is supported both by already existing political, economic and military bodies – EU, NATO etc, that is Western countries, and by CEE countries and North Eastern countries. The history of the latest 50 years in Central Europe has proved a trend to reduce the influenced areas and to increase trust in the joint effort of the European states to build a security strategy based on peaceful co-existence and on enhanced joint cooperation in various fields. The support given to the idea of trust in European integration by giving up all attempts to turn to force is explained by the miracle of the historical reconciliation between the fearful traditional enemies – Germany, France, Austria and Italy; they managed to strengthen some economic and political inter-dependencies that impressively increased the general standards of civilization. Thus, stability and security of the CEE states and security expansion into this geographic area according to a Western model, largely depend on solving crucial economic, political and social problems of transition and on meeting the expectations of the population etc.

Development and enforcement of non-military strategies to promote national and group interests based on generally accepted principles is the key element of the paradigm of security strategy based on peaceful co-existence. In the absence of all military threats, states, companies and individuals compete to prove efficacy of social actions, to increase productivity and efficiency in general, to produce well done things with no constraints. Such social harmony becomes possible by gradually reducing the expression of national interests and progressively increasing the responsibilities of supranational bodies, taking as example the new European construction.

Conclusions. The paradigm of the security strategy of „alone against all” generated a genuine vicious circle because all versions of social construction started from the assumption that insecurity is a universal and permanent feature of human beings and social structures, of the global system, in general, because of its anarchic and competitive nature. In the absence of a recognized global authority, every state felt potentially threatened by any other state and saw the military force as the only protection form. The perception of all-direction threat allowed every state to misinterpret as threats any actions taken by other states while the defensive preventive measure taken by any state could be interpreted as potential future attacks. Consequently, the competition of military strategies became a feature of the global system and wars, a constituent of international life; peace was merely a stage to prepare new military campaigns⁷.

The paradigm of the security strategy „us against all” raised to a higher level the vulnerability and threats status: from independent states to groups of independent states. Thus, threats were perceived as coming not from one state to another state but from groups of states to other groups of states. Such security strategies cause concentration and collection of tremendous, destructive military capabilities, typical in practice of the two World Wars and of the Cold War. This paradigm allowed qualitative improvement of the military war equipment so that the chance of humankind to total self-destruction appeared,

⁷ In detail, **Francis FUKUYAMA**, *The End of History and The Last Man*, Avon Books, New York, 1993, p.247-249

even by mistake. From a rational perspective, the continuation of such a state of affairs became illogical to support.

The more the security strategies based on national interest and its imposition through force upon international relations are being contested, their place will be taken by the new paradigm of the security strategy of the peaceful co-existence based on generally accepted principles. The structural framework of this paradigm consists of actions like: arms control; trust and security measures; peaceful resolution of territorial disputes; measures to impose and maintain peace; resolution of inter-ethnic and religious unbalances based on decisions of regulatory international institutions; development of security and economic integration areas; rigorous arms control etc. Progress in this respect is slow because of national selfishness of some states, regarding their interests that are still seen better promoted through force.

The new paradigm of security strategy in the EU results from the European Security and Defence Policy (ESDP) whose role is to provide Europe with a suprastate operational capability, made of both military and civil facilities, in order to be used for international peacekeeping and security missions upon request of the UN Security Council.

Hence, the more the principles of international governance are accepted and the international regulatory bodies are operational, the more a new paradigm of the security strategy will become more solid.

For many researchers, development of communications, transports and IT allowed citizens across the world to know each other better which significantly reduced nationalism as cohesion force. The traditional nationalist arguments find currently their echo in underdeveloped countries that cultivate isolation for nationalistic or fanatical religious reasons. At the same time, „Another basic concept of the nation-state that needs to be removed is national security. Very few countries can protect themselves on their own, without being helped by a nuclear or chemical or bacteriological weapon. National security is so important that countries protect their integrity through supra state or international organisations like the European Conference for Security and Cooperation or NATO. This stays valid in the case of terrorism, drug-trafficking, environmental issues which have a global dimension and cannot be dealt with unless there are international cooperation and suprastate organisations⁸.”

Since dependencies among national, regional and international economic, political and security complex issues grow deeper, the national state can gradually give up its independencies in favour of supranational institutions; the contents of the new paradigm of security strategy in which the national state „... is too small to solve the big problems of today’s mankind and too small to solve small, daily problems of its citizens will grow from this process⁹.”

The new paradigm of security strategy of peaceful co-existence based on generally accepted principles is currently growing, although not without difficulty.

⁸ **Guillermo de la DEHESA**, *Winners and losers in globalization*, Historia Publishing House, Bucharest, 2007, p.156-157

⁹ **Daniell BELL**, *The World and the United States in 2013*, Daedalus, 1987, p.67

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