

OPERATIONAL ART – ESSENTIAL COMPONENT OF NAVAL DOCTRINE

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In the context of the occurrences of crisis generating causes whose sources are found in the multitude of disputes of a historical, cultural, ethnic, religious or even educational nature, the adoption of operative thinking is a doctrinal actuality requirement. In this context, the use of operative art is a desideratum without which the existence of a doctrine would be devoid of gnoseological consistency.

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„Plans are of little importance, but planning is essential”.

Winston Churchill

Perennial changes taking place on the geostrategic stage, the existence of risks and threats to national security and the need to implement responses that converge towards the same goal impose the usefulness of adopting comprehensive requirements in the doctrines at different levels of military art. All this is reflected in the correct understanding of the significance and necessity of applying operational art in operations, which has often been given a pejorative meaning in the context of its use. In this respect, the correct application of the elements of the operational art is a desideratum not quite easy to achieve, but their use in the field of planning, as an attribute of military conduct, can bring remarkable changes in removing ambiguities, artificial constraints and contradictions that may arise during the decision-making process.

At the same time, the use of doctrinal documents aligned with those used in NATO is also dictated by the adoption of coherent and appropriate measures due, in particular, to the existing hybrid threats in the Black Sea area. In this respect, the existence of an optimal level of training to cope with such coordination, synchronization, integration, prioritization and evaluation requirements is necessary to be in line with what is desired as operational art. Moreover, the mere application of the strategy in the modern operations is not sufficient

for the achievement of success, as the bigger knowledge and the better use of tactics will only lead to the execution of actions lacking operational consistency and characterized by excessive moral and material attrition. An absolute victory cannot be achieved but for an effective combination of strategy and tactics. That is why it is necessary to integrate tactics into a wider framework dominated by strategy. This desideratum can only be achieved by using a buffer level characterized by operational theory and practice and called operational art. It provides a fundamental conceptual structure that supports the integration of tactical actions and gives them a meaning in the strategic vision of fulfilling the conditions that characterize a system that is accepted to be functional in accordance with national interests.

In the current reality, characterized by sudden and unpredictable changes in the operational environment, operational art, although specific to the operational level, must be understood and used appropriately at the strategic and even tactical level. Also, the same operational reality directs its two components, the theory and the practice, so that the operational concepts used are correctly understood and lead to the realization of the purpose of operational art, to integrate the ends, means and ways to achieve the desired end state at the political level. History has shown that operational thinking based solely on the use of technology can prevent success, as compared to an opponent who, although lacking advanced technology, can achieve the

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desired results only through the development and use of superior operational concepts. In a conflict between two opponents, success will be on the part of the one who thinks and acts with greater determination supported by a solid foundation of operational theory and practice. However, these features of operational thinking do not explicitly mean abandoning the use of technology but are, together with it and the operational concepts that reflect the lessons learned throughout the military history, an absolute gain in achieving the strategic goal.

Operational art – evolution, interpretation and theoretical considerations

It is obvious that operational art has two components, namely operational practice and operational theory, the latter being the predecessor of practice. To the same extent, operational art involves both the art which operational practice corresponds to, and science correlated with operational theory. The history of military art fully confirms that the development of weapons and fighting techniques in general has determined the manner how to organize and conduct combat operations. Thus, for a long time in the history of armed conflicts when this level was poorly materialized, the wars had a local, static character, limited in size and, in principle, they decided through one decisive battle without having previously achieved shaping battles leading to the decisive one. Under these circumstances, military art was attributed to two branches: strategy and tactics. The responsibility of the strategy was directed to achieving the war plan with the objective of destroying the enemy through such a decisive battle, and the tactics was responsible for taking action on the spot in the field / environment of the battle.

Evolution of operational practice – the component of operational art

As technology evolved, and especially since the 18th century when the Industrial Revolution was triggered, in order to achieve the decisiveness of that single battle, the armies of the world began a process of technological endowment in parallel with increasing the number of troops. All these demands of time combined with the implementation of these changes led to the rethinking of military art as a whole, recognizing the need to adopt

new, operational concepts, such as: coordination, synchronization, integration and centralized or decentralized command and execution.

A series of views of military art researchers attribute the sediment of today's operational practice to military leadership illustrators since ancient times, such as Alexander the Great (356-332 BC), Hannibal (247-182 BC) and Julius Caesar (101-44 BC)¹. However, according to Claus Telp, the remarkable military personality that tainted operational practice through his actions was Napoleon I (1769-1821). For the first time, there was a glimpse of the need for operational thinking oriented towards planning, organization, coordination, synchronization and logistics, all of which were approached in such a way as to achieve a common purpose. From the point of view of the organization of his army, he applied the principle of decentralized control over the army corps, descending to the infantry divisions formed by infantry and cavalry units, fulfilling the conditions of a joint type organization. By pursuing the dividing of the enemy formation so as to more easily destroy it, he applied the principle of force distribution so that in conjunction with the synchronization of actions he led to a resounding success in the Jena Campaign of 1806 against the Prussian Empire. This campaign is renowned for the two decisive battles, at Jena and Auerstaedt, which took place on October 14 in 1806 but in different locations, about 20 km from each other. It is obvious that Napoleon's operational practice of using multiple army corps by a large-scale maneuver predict a fundamental principle of operations, namely that of the unity of the effort / purpose, which at the time it is called „*the strategy of a single point*”².

In the same way as the Napoleonic practice, the actions of the two generals during the American Civil War (1861-1865) are remarkable: General Robert E Lee (1807-1870) – commander in chief of the Confederate Forces and General Ulysses S. Grant (1822-1885) – commander in chief of Federal Troops. Although both were equally brilliant visionaries, unlike General Lee, who remained trapped in traditionalism without retaliation from the rules of the stationary warfare, General Grant made full use of experience gained during the Mexican-American War (1846-1848). Thus, he organized and phased in all the Civil War operations so that mutual support and the

benefits of the industrial revolution were ensured. In addition to the simultaneous use of several army corps distributed throughout the theater of operations, decentralized command and control (C2), and logistical support, Grant outlined a plan of operations he presented on 4 April 1864, which was „to work all parts of the [entire Federal] army together, and ... toward a common center”³ where the center was represented by Lee’s army. It identified the central point represented by the enemy army as an operational center of gravity for whose destruction/neutralization Grant had developed a course of action in two directions: one aimed at deep penetration behind the enemy in order to interrupt his replenishment lines and the second one by stopping enemy’s advancing and encirclement leading to capitulation.

Both the Napoleonic Period and the American Civil War were the earliest operational manifestations marked by the economic and social changes that triggered the onset of the operational level that would normally not exist due to the absence of circumstances such as: sufficient armed forces, adequate armaments to this level, and the support that the nation could provide. Until the 18th century the onset of operational practice was hard to predict due to the small army formed mainly by mercenaries without military training; starting with this century the „million-man”⁴ arise as a result of the mobilization of the population which forced the area of operations to be enlarged, actions are simultaneous in nature in order to create the conditions for decisive battles, which led to the increase of the war period.

Starting with World War I (1914 - 1918), the horizon of operational practice was widened by attempting to penetrate the defense line while adopting a maneuvering character for the purpose of denying of the withdrawal of the enemy and automatically encircle them. Although this war was particularly a war of material and moral attrition with disastrous results, there are some examples to be considered from the point of view of operational art. Thus, the Gallipoli Landing (1915) can be taken as an operational benchmark in terms of planning, deploying and supporting logistics of a multinational joint force. The Battle of Jutland (1916) in the North Sea was also an operational chapter showing the synchronization of the tactical actions of the English fleet to prevent the achievement

of the operational objective of the German fleet consisting of destroying a major part of the English fleet acting as naval blockade force.

The Second World War (1939-1945) was marked by a rich operational practice because the operational theory was crystallized in the interwar period in a content close to what we know today. Already certain operational concepts were known by the commanders of that period and they had been practiced and refined by being put into practice during the second world conflagration. A number of operational successes are recorded in various operations precisely because of the application of elements of operational art. The Weserübung Operation (April 9, 1940) was characterized by the development of operational level planning for the use of a joint force compound of land, airborne and naval components, through unity of effort, surprise, force economy, and synchronization. Under the same conditions, one month later, Operation Gelb took place during which, in addition to the previous one, the centralized planning process was used but followed by decentralized execution. The Granite Campaign (1944) brought to the fore all the elements of a modern operational plan with the establishment of the strategic objective, identifying the operational objectives for each operation according to each phase, tasks for the subordinate forces to achieve the alignments established according to a synchronization matrix.

All these examples of operational practice can be complemented also by Romanian manifestations of operational practice. In this regard, we can exemplify the Battle of Szolnok⁵ (24-25 July 1919) within the Campaign for the Liberation of Transylvania. This battle led by General Gheorghe Mărdărescu is marked by the synchronization of actions, which led to the achievement of the operational level objective - the liberation of Transylvania from the Hungarian occupation. Moreover, the coordination of the three army corps for the „double encirclement”⁶ maneuver led to the surprise of the Hungarian forces that eventually withdrew in total disorder. This battle, led by General Mărdărescu, demonstrated the very essence of operational art, namely, „to win decisively in the shortest time possible and with the least loss of human lives and material”.⁷ Also, in the history of the Romanian military conflicts it was demonstrated that the commanders proved the

possession of operational thinking oriented to the maneuver of enveloping the enemy, cutting down their communication lines, penetrating deeply and denying the freedom of maneuver, all of this are similar to what was later stated in 1933 by Mikhail Nikolayevich Tukhachevsky (1893-1937) through the concept of „deep battle”⁸.

As we mentioned above, operational practice has created the premise of the development of operational theory to make commanders understand both the positive and negative results obtained by applying intuition, inspiration, or presence on the battlefield of historical examples.

Evolution of operational theory – the component of operational art

The first rudimentary operational ideas were depicted by Maurice - Count of Saxa (1696-1750), who concluded the opportunity to attack the enemy’s logistic lines, thus causing weakness and abandoning the will to fight.

Having common ideas with Saxa, another precursor of operational theory was Frederick II The Great (1712-1786), who denoted the lowest level as „petite service”⁹ and the upper level, equivalent to the strategy, was „connaissances du général”¹⁰. He also believed that a war should be short in period and at a higher tempo to save resources, and from the point of view of enemy logistics replenishment lines, they must be attacked by adopting guerrilla tactics.

Dietrich Heinrich Freiherr von Bülow (1757-1807) made the first mention of the operation in his book „Geist des neuen Kriegssystems”¹¹, describing the operation as an army movement directly reported to the enemy’s actions.

The onset of operational thinking is attributed to Carl Von Clausewitz (1780-1831), a remarkable personality that, in his work entitled *On War*, still gave rise to disputes and controversies about certain concepts such as the center of gravity. Clausewitz took over from von Bülow the concept of operation and redefined it as an army movement within an operational plan. In addition to this concept, other concepts related to the „Kulminationspunkt”¹² and the „Schwerpunkt”¹³ related to center of gravity were mentioned in the book, the last one being translated as the „point of main decision”¹⁴.

Antoine Henri de Jomini (1779-1869) also stated in the book „*Precis de l’Art de Guerre*”¹⁵

the importance of taking control of enemy communications lines while protecting their own. The famous Swiss strategist is attributed the concept of „grand tactics”¹⁶ to describe tactical actions with a pronounced maneuvering character and executed in an early phase of the conflict in order to gain advantage in the battle.

Although Jomini’s approach to the art of war was based more on mathematical calculations than on art itself, its influence is found in other publications in the field at that time.

Thus, in the USA, several books were published such as: „*Military Art and Science*”¹⁷ (1848) of General Henry Wager Halleck, the „*Elements of the Art of War*”¹⁸ (1889) by Colonel James Mercury and the „*The Principles of Strategy*”¹⁹ (1894) whose owner is John Bigelow, and in England, General Patrick Leonard MacDougall published the „*The Theory of War*”²⁰ (1856) within the British Staff College, which was later replaced by the „*Operation of War*”²¹ (1866) by General Edward Bruce Hamley.

On the other hand, Clausewitz’s theory of operation was taken over by General Helmuth von Moltke Sr. (1800-1891) who considered the operation to belong to an intermediate field of study between strategy and tactics, being executed as part of a campaign to achieve objectives set by the strategy. Moltke considered the strategy to be responsible for carrying out all operations in the theater that had to be executed in order to have forces at beginning moment onset of the decisive battle. Tactics, from the point of view of the illustrious Prussian strategist, aimed at the methods of taking action during the decisive battle, with emphasis on flank attacks.

The benefits of maneuvering war are recognized for the first time by General Sigismund von Schlichting (1829-1909), who emphasized the importance of engaging the enemy preventing own movements. Thus, on the basis of the evolution of military technology, the size of the army corps and the expansion of the theater of operations, he emphasized the inefficiency of the concentration stage before the decisive battle, which involved the assembly of the whole army in a favorable position and the attack of the enemy from that static position not from the movements.

Wilhelm Leopold Colmar von der Goltz (1843-1916) is another theoretician of operational

practice, an adept of Clausewitz's thought that the campaign is a series of operations whose purpose was to create the conditions for the decisive battle. He also considered the center of gravity as always represented by enemy army.

Field Marshal Alfred von Schlieffen (1833 - 1913) strongly believed in the maneuver war („bewegungskrieg"²²) giving the example of the Battle of Cannae (216 BC) to explain the ineffectiveness of frontal attacks compared to those in the flank which, although they were at increased risk in terms of division of forces, had higher chances of success in relation to fixed position attacks.

All these operational theoretical references contributed to the onset of the operational art whose birth is attributed to the Soviet side. The experience gained during the Russo-Japanese War (1904-1905), the First World War and during the Russian Civil War (1918-1920) were the factors that contributed to the revival of Russian operational thinking.

The major contribution to the birth of operational art was made by Alexander Andreyevich Svechin (1878 - 1938), considered to be its founding father, who proposed the need for an intermediate level between strategy and tactics which he called the operational level to be the responsibility of operational art. In his book entitled „Strategiya" (1926), Svechin first defined operational art as „the totality of maneuvers and battles in a given part of a theater of military action directed toward of achievement of the common goal, set as final in the given period of the campaign"²³. Also, for the first time Svechin described the nature of operational art and the relationship between it and strategy and tactics, thus „battle is the means of operation. Tactics are the material of operational art. The operation is the means of strategy, and operational art is the material of strategy. This is the essence of the three-part formula given above"²⁴. As a conclusion, Svechin's operational art is the instrument by which the operational-level commander arranges tactical successes in an operational framework aimed at achieving strategic success in a theater of military actions.

The theory of operational art described by Svechin continued to represent the favorable framework for the development of the concept of

„deep battle"²⁵, a tactical level concept proposed by Mikhail Nikolayevich Tukhachevsky (1893-1937) as a solution to break through enemy defense that was so disastrous during the First World War.

In conjunction with this tactical level concept, the concept of „deep operation"²⁶ by Vladimir Kiriakovitch Triandafilov (1894-1931) was proposed at the operational level as a solution for the neutralizing of C2 and operational logistic support lines. Also, in order to achieve surprise, Triandafilov calculated the necessary operational level capabilities: „4-5 rifle corps with their organic artillery assets, 4-5 artillery divisions and 8-12 tank battalions"²⁷.

The concept of deep operation was completed and improved by Georgians Samoilovich Isserson (1898 - 1976) who proposed the concept of „deep offensive operation"²⁸ as an operational level form for the accomplishment of the defense in order to stop the enemy offensive.

Analyzing these theoretical exposures of operational thinking, we emphasize that the interwar period was the turning point for the birth and development of operational art, mainly due to the practical experience gained and the lessons identified during the First World War. Also, this period is representative of how the characteristics of operational art have evolved: spatial and temporal dimension, joint nature of forces organization, command and control system, combat power, planning, deployment and logistics. The factors that contributed to the emergence and development of operational art were:

- practical experience and lessons identified from previous conflicts;
- the development of weapons and combat techniques, as well as the endowment of forces with such means of fire;
- the temporal and spatial expansion of combat actions as a result of the increase of troops, the endowment with modern technology in terms of fire power, range of action and mobility;
- the impossibility of achieving the strategic objective through only one decisive battle, requiring successive battles to be made, consistently arranged in a campaign's operational framework that will lead to the achievement of the strategic objective;
- the joint compound of forces to achieve the strategic objective.

Theoretical considerations of operational art

Compared with the definition formulated by Svechin, the definition of operational art is now much improved and in line with current operational environment requirements. In generic terms, operational art is „a component of military art concerned with the theory and practice of planning, preparing, conducting, and sustaining campaigns and major operations aimed at accomplishing strategic or operational objectives in a given theater”²⁹. The military literature reviews the definition of operational art according to the specificity of each field of service’s action (air, land or sea) or according to the culture, philosophy or military traditions that guide the operational consciousness of military theorists. A reference definition for the doctrines of the national services might be the one mentioned in the Joint Allied Doctrine where operational art is „employing forces, in concert with other agencies, to achieve strategic and operational objectives through the design, organization, integration and conduct of strategies, campaigns, major operations and battles”³⁰. Under the current auspices of the comprehensive approach, a concept accepted in the NATO which we are part of, and to which each service must bring its contribution, the definition in the allied doctrine is a comprehensive one, listing everything in its content as all instruments of manifestation of operational art (design, organization, integration and conduct) so that both the military and the non-military instruments make full use of it to respond coherently to resolving a possible crisis situation.

From the point of view of purpose, operational art is the principal instrument which, on the basis of its concepts of expression, helps to correlate the objectives pursued with the ways and means made available and within the limits of the accepted risks. So, the purpose of operational art is to correctly formulate the answers to the four questions³¹.

1. *What are the conditions to be met for accomplishing the strategic objectives? (ends);*

2. *What are the military capabilities and resources to be allocated in order to performed these conditions? (means);*

3. *What is the sequence in time and space of actions to ensure these conditions? Under what approaches will those conditions occur? (ways);*

4. *What are the costs of executing the proposed actions? (risks).*

In another approach, the purpose of operational art is to establish the optimum balance between resources, actions and end state within the limits of accepted risks. This balance could be achieved by integrating, synchronizing and coordinating tactical actions to achieve the set end state. So if the purpose of operational art were not being attained, then any operation or campaign would consist of a series of tactical actions executed at random without having the necessary consistency to achieve strategic success. A series of incoherent and unrelated tactical actions can lead to operational success even strategically but in a very long time, with many losses, which would increase the weariness of the forces, which contradicts precisely what Milan Vego said in his *Joint Operational Warfare*, respectively, achieving decisive victory in the shortest time and with minimal losses.

Regarding the characteristics³² of the operational art that differentiates it from tactics, these are the ones that give it the distinctive side-specific level. A first feature is the objectives that are determined and cover a wide range of tactical tasks. While operational level objectives derive from the conditions to be met to achieve the desired strategic end state, at tactical level objectives are received and their place is directly taken over by tasks to achieve the effects that characterize operational objectives.

Greater dimension of space, time and forces reflected in the need to achieve operational and/or strategic objectives is another feature of operational art. While a tactical action takes place in a limited area, with a duration from a few minutes to several hours, a joint operation takes place in a theater of operations that consists of several action areas and can last from a few weeks to months or even years, as is the case with the US anti-terrorist operation.

Regarding the size of the forces, if it is not taken into consideration with previously two characteristics, this one is relative in nature to what we refer to as a characteristic by itself. This relativity is given by situations when a small force is acquainted with accomplishing a specific task, so that their acts produce operational or even strategic effects (e.g., special forces, submarines). What can cause this situation is the ability to exploit the vulnerabilities of the enemy by own strengths of several services.

Also, due to space and time, operational forces can have a joint character compared to tactical forces where they can be homogeneous in terms of organization. And for a comprehensive approach to the operational problem, other non-military organizations may be involved alongside the military forces.

Combat power is another characteristic of operational art emerging from the evolution of military technique. Under the conditions of emergence of modern types of weaponry, their use goes beyond the sphere of tactics by increasing the spatial dimension while reducing the time. The effectiveness of this characteristic exponentially increases with the judicious use of operational art that can supply the limited number of troops involved in a joint operation.

Operational planning is very complex, requires time and resources of all kinds compared to tactical level planning. Planning is also regressive in that it first determines the purpose (objectives and desired end state), then the necessary ways and means. At the tactical level, the planning is a progressive type in which the objectives are received from the operational level, and then the ways of their accomplishment are established in a progressive sequence. The progress of tactics is also given by the necessity of fulfilling a certain task, because the others can be dependent on the realization of the latter. In terms of planning time, that is quite high as compared to the tactical level because the specific objectives of the operational level are difficult to quantify, which makes them usually overestimated.

Operational deployment has a far greater impact than at tactical level. A mistake on this issue at the operational level may have adverse tactical consequences. Instead, tactical deployment is easier to achieve without a fatal impact on the operation itself.

The command and control of operational level logistic support requires special attention compared to tactical level. A poor C2 of logistics support can have a decisive influence on the success of an operation. Therefore, it is advisable for the joint force commander to have authority of operational command and control on logistic units.

At the operational level the approach (thinking) of the problem to be solved is a much more complex process than at tactical level where this feature is

almost lacking. The operational problem covers a vast array of not only military aspects, but also of non-militaristic issues, which makes operational thinking expressed through operational language that contains clearly defined concepts, understood and accepted by all elements of power - diplomatic, information, military, economic.

The relationships between the three components of military art are somehow interconnected. Thus, the strategy defines objectives (ends), establishes the means and imposes limits and operational art identifies the ways of fulfilling in direct accordance with the elements specified by the strategy. The tactics, in turn, aims to observe the achievement of tasks in accordance with the framework defined by operational art. Thus, operational art serves as a buffer between strategy and tactics, being connected with strategy and connecting, in turn, tactics. If this buffer zone did not exist, there would be a risk of tactics being subordinated by a strategy called „*politicization of tactics*”³³, and if the strategy is subordinated to tactics, there is the risk of „*tacticization of strategy*”³⁴.

Operational design – the primary tool for application of operational art

As it is apparent from the definition of operational art mentioned in the Allied Doctrine, the operational design is the primary tool through which the use of forces is depicted to achieve operational and/or strategic objectives.

The Operations Planning Manual presents the operational design as being *formulation and development of the overall idea (including the commander's intent), how to perform the operation („how”), based on the overall estimate of the situation and mission analysis*³⁵ associating this definition with the purpose for which there is such a concept in the planning process. Therefore, the purpose is oriented towards a representation, both graphical and textual, of how the sustained operation is carried out by the commander's vision after he has correlated the pursued ends with the ways and means provided to the extent of the accepted risks, thus responding to the four questions in this regard. Also within the definition there is the temporal location of the design time, that is during the third phase of the planning process when the planning guidelines of the strategic-level commander were received. Another definition of the operational

design is oriented towards the graphic (cognitive) construction on which the reference object of the operation is based, as follows: *operational framework that sustains the maritime operations plan and supports the execution, or a conception and construction of a framework underlying the operation plan and its subsequent execution*³⁶.

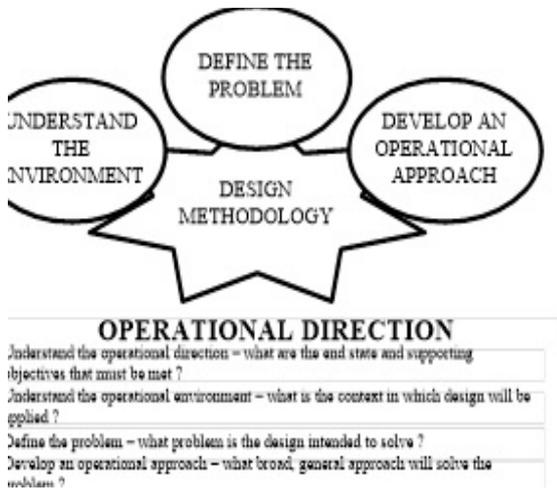


Fig. 1 Designing Methodology
Sursa: JOPP, p. D-2

The volatility of the current security environment conditions implies the need for coordinated, integrated and synchronized action of all instruments of power to achieve the conditions that characterize the desired end state. This requirement can be achieved through the operational design, which ensures both integration and synchronization and coordination in order to achieve the unity of effort. For this, it is of crucial importance to know the methodology of realizing the operational design, which is why, below, we will present the steps to be taken in account, in general, to achieve a viable and applicable design.

Such a methodology³⁷ as shown in figure no. 1³⁸ consists of the following steps: understanding the operational direction, understanding the operational environment, defining the problem and developing an operational approach. The understanding of the operational direction is based on the dialogue developed to understand the intent of the strategic-level commander, the strategic desired end state, the strategic objectives that will lead to the realization of this end state in order to appreciate correctly what will be the purpose for which the operational design will be developed. The correct assessment of the strategic desired end state is particularly crucial as it includes the acceptable conditions to which the crisis system is to migrate.

Also, understanding the objectives that support the desired end state will define the operational problem and the limitations, planning assumptions and explicit tasks will facilitate the development of the operational approach. The second step of understanding of the operational environment, is performed from a systemic perspective³⁹ (the PMESII model) and constitutes a reference model in support of the step of defining the operational problem by identifying the center of gravity, the actions to be taken and the instruments of power to be used. All these elements from the understanding of the operational environment will be the necessary ingredients for defining the problem that hinders the attainment of the conditions which are defining the desired end state.

Developing an operational approach step is itself the commander's perception of changing the current, unacceptable conditions of the system concerned under acceptable conditions within the limits imposed by the strategic directive.

As it can be seen in figure no. 2⁴⁰, the graphic construct of operational design is very similar to the design with the difference represented by its general shape. Instead, the particularity of this

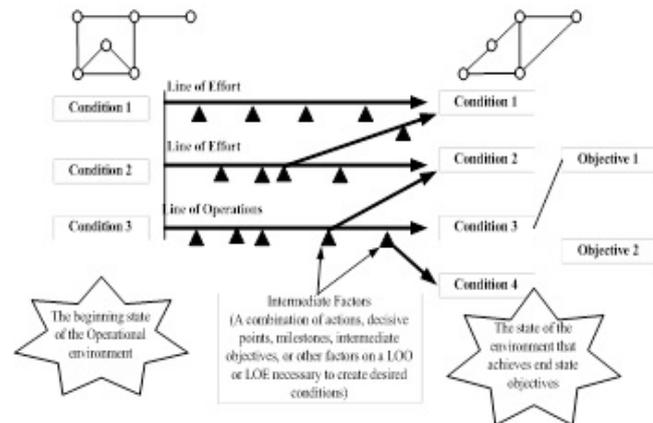


Fig. 2 Operational Approach
Sursa: Joint and Coalition Warfighting, Planner's Handbook for Operational Design, p. VI-2

construct is represented by the expression of time (as an operational factor) materialized by the dividing into phases. Another particularity is given by the non-synchronization of the decisive points for all lines of operation/effort as well as their sequence along a single line of operations/effort.

These design methodology steps can be considered useful in developing operational design, stating that such methodology needs to be adjusted

to meet the planning needs of an organization and to respect the reality of the operational environment. In the literature in the field there is a wide range of elaboration methodologies, some consisting of three stages, others having some stages merged, and moreover lacking a general valid and applicable pattern in all situations that characterize, at a certain moment, the operational environment.

Conclusions

In conclusion, operational art is an essential component of a doctrine as it is the main means of linking all tactical actions by embracing them in a general framework to achieve the objectives established by the strategy. The importance of applying operational art gains superior valences when its scientific character is complemented by those attributes of art – ability, skill, mastery, creativity. A sound tactical-level concept of the use of joint forces will lead to tactical success but not to achieving strategic objectives unless it is an integral part of an excellent concept of operations. In turn, this concept of operations must be characterized by elements of synchronization, sequencing, and coordination of tactical actions to shorten time and avoid unnecessary resource losses. Poor performance of operational art leads to tactical failures that produces operational or strategic failure. And the simple use of superior technology or the superiority number of troops does not guarantee strategic success unless it is in high attrition. The essence of operational art will be fulfilled when operational thinking is accomplished faster and better in conjunction with the use of superior technique. The technological advantage by itself will not surpass the operational art, although its theory and practice have been and will be influenced by superior weapons. That is why operational art is constantly improved and the creativity of its implementation will guarantee strategic success.

NOTES:

1 Milan Vego, *Joint Operational Warfare – Theory and Practice*, US Naval War College, Second Printing, 2009, p. I-15.

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3 *Ibidem*, p. 9.

4 Milan Vego, *A short history of operational art*, Naval War College Faculty, aprilie 2007, p. 2.

5 Sursă accesată pe situl: https://istoria.md/articol/844/Războiul_romano_ungar_de_la_1919,_de_la_Tisa_la_Budapesta accessed at 22.01.2019.

6 *Ibidem*.

7 Milan Vego, *op. cit.*, p. I-6.

8 Oleksiy Nozdrachov, *Application of The Soviet Theory of "Deep Operation" during the 1939 Soviet-Japanese Military Conflict in Mongolia*, Fort Leavenworth, Kansas, 2010, p. 25.

9 Claus Telp, *op. cit.*, p. 5.

10 *Ibidem*.

11 Milan Vego, *A short history of operational art*, Naval War College Faculty, aprilie 2007, p. 19.

12 *Ibidem*.

13 *Ibidem*.

14 *Ibidem*.

15 *Ibidem*.

16 *Ibidem*.

17 Colonel Michael R. Matheny, *The Roots of Modern American Operational Art*, http://www.au.af.mil/au/awc/awcgate/army-usawc/modern_operations.pdf, accessed at 23.01.2019.

18 *Ibidem*.

19 *Ibidem*

20 *Ibidem*.

21 *Ibidem*.

22 Milan Vego, *op. cit.*, p. 21.

23 Oleksiy Nozdrachov, *op. cit.*, p. 17.

24 *Ibidem*.

25 *Ibidem*, pp. 20 - 25.

26 *Ibidem*, pp. 29 - 32.

27 *Ibidem*, p. 32.

28 *Ibidem*, p. 36.

29 Milan Vego, *op. cit.*, p. I - 4.

30 ***AJP 01 (E), *Allied Joint Doctrine*, NSA, 2017, pp. 4 - 5.

31 ****Doctrina Planificării Operațiilor în Armata României*, Bucharest, 2013, p. 39.

32 Milan Vego, *op. cit.*, pp. I-7,8.

33 Milan N. Vego, *op. cit.*, p. I-11. Politicization of tactics is influencing tactics by national habits or policies that can have disastrous consequences at tactical level with repercussions on operational and strategic end state. For instance, French tactics before 1914 had as a principle of offensive *fighting at any price* that had a negative effect on the operational level and, moreover, it was disconnected from the strategic reality.

34 *Ibidem*, p. I-10. This phenomenon was first named by Michael I. Handel in his work *Masters of War: Classical Strategic Thought* and represents a consequence of the evolution of technology, especially in the airfield, where the targeting replaces strategic planning. In another way, instead of setting objectives first without being influenced by tactics (from top to bottom, not bottom-up), these objectives bear the influences of the tactics or the evolution of the air weapon (apud: Colin S. Gray, *The Air Power Advantage in Future Warfare: The Need for Strategy*, Airpower Research Institute, Maxwell Air Force Base, Alabama, 2007, pp. 35-36).

35 *** *Manualul de Planificare a Operațiilor*, Editura Militară, Bucharest, 2016, p. 187.

36 Florin Nistor, *Să redescoperim arta operativă maritimă*, "Carol I" National Defense University, Bucharest, 2017, p. 90.

37 *** JOPP, *Joint Operation Process Workbook*, JMO Department, Naval War College, July 2013, p. D - 1,9.

38 Figure taken and adapted from JOPP, *op. cit.*, p. D - 2.

39 The system approach is achieved through the 6 domains (PMESII - Political, Military, Economic, Social, Infrastructure and Information) that support the analysis of the operational environment as a system of nodes, links and interactions/influences that are examined to view and understands the logic of how the system is operating.

40 Figure taken and adapted from J-7, Joint and Coalition Warfighting, *Planner's Handbook for Operational Design*, Suffolk, Virginia, 2011, p. VI - 2.

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