

MILITARY ADAPTABILITY IN THE FACE OF THE UNKNOWN

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Abstract: *This paper examines the role of military adaptability in managing hybrid operating environments. Modern conflicts are characterized by a high degree of complexity and ambiguity, posing significant challenges to armed forces in the military operations they conduct. In this context, the research provides a concise overview of how adaptability can be applied at each level (individual, organizational, national, and allied). It also highlights key factors that must be considered to enhance adaptability. By employing qualitative research methods, the findings contribute theoretically to the advancement of Military Sciences by establishing the status and role of military adaptability within contemporary military conflicts. Moreover, from a practical standpoint, the results presented provide a solid foundation for an expanded PhD program in which concrete strategies for adapting military forces to hybrid operating environments will be further developed.*

Keywords: military adaptability, hybrid conflict, operating environment, artificial intelligence, emerging technologies

1. Introduction

The rapid changes taking place both in the international security environment and across various spheres of social life have created a general sense of uncertainty. This has significant consequences, ranging from the individual level to the organizational, national, or allied levels, by impairing the decision-making and execution capabilities of each entity. In the military domain, the ambiguity characteristic of the operating environment is closely linked to the evolution of the concept of hybrid warfare. Thus, recent conflicts have demonstrated that the modern battlefield continues to be characterized by conventional forms of confrontation, to which, nevertheless, the use of unconventional, kinetic, or non-kinetic tactics is added. Furthermore, rapid technological advancements – such as drones and autonomous systems, artificial intelligence (AI), precision-strike weapons capable of penetrating deep into enemy

lines, and systems specific to cyber and electronic warfare are driving substantial transformations at both the structural – organizational and doctrinal – operational levels, characteristic of a new Revolution in Military Affairs. In this context, the concept of adaptability is considered by many experts to be the primary solution to uncertainty and complexity, and is frequently discussed in the specialized literature.

However, with regard to military adaptability, further research is needed to examine the status and role of adaptability in relation to the major changes brought about by the conflicts of recent years. Thus, the aim of this research is to briefly illustrate the importance of military adaptability at each level of reference (individual, organizational, national, and allied), as well as to identify its main enabling factors and challenges.

This scientific endeavor was grounded in

the main research hypothesis that adaptability represents the main solution in managing hybrid operating environments. To test the aforementioned hypothesis, the following research objectives (RObj)s were formulated:

- **RObj₁**: defining adaptability and briefly illustrating its importance at the individual, organizational, national, and allied levels;
- **RObj₂**: highlighting the main factors contributing to and challenges facing the adaptability of military forces.

Furthermore, to achieve the research objectives, the following research questions (RQs) were formulated:

- **RQ₁**: How is military adaptability defined in the specialized literature?
- **RQ₂**: What role does military adaptability serve at the individual, organizational, national, and allied levels?
- **RQ₃**: What are the main factors contributing to the development of military adaptability?
- **RQ₄**: What are the main obstacles that could limit the development of military adaptability?

The research is based on qualitative methods, specifically: critical analysis of the specialized literature, synthesis of information, the descriptive method, and indirect observation. These methods will be applied individually or in combination to achieve the proposed objectives and test the validity of the main research hypothesis.

Ultimately, the issue studied makes significant contributions to the field of Military Sciences. From a theoretical perspective, the research helps refine the concept of military adaptability and reiterates its importance at every hierarchical level. Furthermore, from a practical perspective, identifying the enabling factors and challenges of military adaptability can serve as a starting point for formulating concrete strategies through which military forces can effectively adapt to constantly changing operating

environments. In this context, it is important to note that this paper marks an initial starting point in an extensive PhD programme.

2. Adaptability – Theoretical Approaches

Countries around the world, organizations, national and international institutions, as well as civil society, are seeking to adapt quickly in order to respond effectively and in a timely manner to change. In this context, the manifestation of the concept of adaptability across various fields, each with its own specific characteristics, gives it a multidisciplinary nature.

In general terms, we can define adaptability as the ability that allows an individual to adjust their behavior and provide appropriate responses to the various situations or people with whom they interact [1]. This definition invariably applies to groups as well, referring to the adjustment of behaviors, processes, or actions so that the resulting response aligns with the new demands of the situation.

In the military field, adaptability is defined as “the ability to influence conditions and respond effectively to changing threats and situations with appropriate, flexible, and timely actions” [2]. According to U.S. doctrine, the adaptation process comprises two essential stages: identifying the new parameters that must be met to effectively manage the new situation and adjusting existing strategies in accordance with the new realities. Moreover, military adaptability is closely related to other key concepts, such as mental agility, versatility, resilience, and self-awareness [3]. In terms of its manifestation, adaptability proves important at the individual level as well as at the organizational, national, or allied levels. Each level will be discussed below.

2.1. Individual Adaptability

At the individual level, adaptability refers to each service member’s ability to adjust their behavior and actions in response to the unpredictable changes characteristic of the modern battlefield. This concept is closely

linked to the effectiveness of the leadership style employed by military personnel in command roles. Leaders who demonstrate adaptability and flexibility are able to quickly and effectively adjust their leadership style in response to dynamic changes in the operating environment [4], as well as manage the stress generated by the complex situations to which they are constantly exposed.

In response to the complexity of contemporary operating environments, adaptive leadership is considered by many experts to be one of the most flexible and effective leadership styles. The concept of adaptive leadership gained prominence in academic circles following DeRue's work [5]. According to several specialists in the field, the theoretical framework of adaptive leadership includes three fundamental components: situational challenges, leader behaviors, and adaptive work [6]. Furthermore, applying the principles of adaptive leadership brings numerous benefits to the organization, including: strengthening readiness for change, increasing employees' emotional commitment to change, supporting the development of their competencies, and promoting an open and flexible organizational culture [7].

During military operations, leaders develop plans, make decisions, and direct actions under conditions characterized by a high degree of uncertainty. In such constantly changing environments, the philosophy of Mission Command is applied, an approach that encourages adaptability and flexibility—two essential skills that enable the leader to identify and appropriately adjust the plan, mission, or structure they are leading, depending on external influences [8].

Adaptability proves particularly important in a multinational environment as well. During operations, military personnel engage in interpersonal interactions with various audiences (both partners and the civilian population) in the area of

operations. Awareness and acceptance of cultural differences, along with the encouragement of dialogue and communication, facilitate the military's adaptation to a specific area of operations and the fulfillment of missions [9].

Ultimately, individual military adaptability is a skill that should be cultivated as early as during military training, contributing directly to a far more flexible and efficient military organization.

2.2. Organizational Adaptability

In the field of organizational science, adaptability refers to a military organization's ability to adjust its processes and modify its force structures and doctrinal strategies in response to the challenges posed by a specific operating environment [10]. The authors emphasize the essential role of organizational adaptability in maximizing performance, which is supported by flexible structures, continuous learning systems, and dynamic decision-making processes. Furthermore, organizational adaptability contributes to the effective implementation of technological advancements [11]. Recent conflicts have increasingly highlighted the need to equip the armed forces with modern combat equipment and technologies, such as drones, AI, or autonomous systems. Delayed implementation or the lack of implementation creates a significant disadvantage for the armed forces involved in a potential conflict.

Moreover, at the organizational level, adaptability must be present at all hierarchical levels for the effective management of unforeseen situations, as well as for reducing the ambiguity of an operating environment characterized by constantly evolving threats [12]. Thus, U.S. doctrine considers adaptability a defining trait of military personnel within a structure's general staff, as they "recognize and adjust to changing conditions in an OE with appropriate, flexible, and timely actions. They rapidly adjust and continuously assess plans, tactics,

techniques, and procedures as additional information becomes available” [13].

2.3. National/Allied Adaptability

At the national level, the importance of the military’s adaptability in responding to threats to national security is widely recognized. Thus, the Romanian Ministry of National Defense emphasizes the need for ongoing organizational and structural adaptation of the armed forces to enable them to fulfill their missions, as well as the adaptation of the military education system and training processes to external changes and future trends [14]. Furthermore, when the national adaptability is brought into attention, it has to include civil society. The extent to which the population manages to adapt to difficult and uncertain times, as well as the timely transition of the economy, industrial processes, and other essential systems to support a war effort, supports the armed forces’ efforts in achieving a favorable outcome.

At the alliance level, adaptability involves understanding geopolitical relations, maintaining a high level of situational awareness, identifying potential threats to the alliance’s security, and developing strategies designed to deter or respond to hostile actions. Within the EU and NATO, adaptability is enhanced through cooperation and mutual support, as well as through significant efforts toward standardization and interoperability, which facilitate coordinated and effective responses to emerging security challenges, strengthening collective resilience and operational effectiveness.

3. Factors Facilitating and Challenging the Adaptability of Military Forces

The development of military forces’ adaptability is shaped by a range of internal and external factors, which can both facilitate this process and pose significant challenges. The main factors identified include, but are not limited to, command and control systems, the conduct of military operations, the ability to integrate emerging

technologies, information flow management, force training processes, the level of interoperability, as well as the ability to manage stress and burnout during military operations.

First and foremost, the activities carried out by Command and Control (C2) systems are aimed at the coherent integration of the efforts of all participating forces in order to achieve common objectives. In future conflicts, the adversary will seek to maximize its results through the efficient use of forces and resources with minimal losses and consumption. In this context, the adversary’s hostile actions against the C2 systems of friendly forces can manifest themselves in both the physical and informational domains, aiming to block the flow of information between sensors, decision-makers, and executors, thereby generating uncertainty and delays in the transmission and execution of orders. Thus, C2 systems become vulnerable both to the enemy’s kinetic attacks, aimed at neutralizing the human and material resources that comprise them, and to non-kinetic actions, manifested in particular through cyberattacks intended to affect IT platforms and paralyze the timely execution of command [15]. On the other hand, an effective C2 structure facilitates the timely execution of maneuvers, the adaptation of one’s own forces in complex operating environments, and, at the same time, enables the defeat of forces that are superior in terms of quantity or quality [16].

Second, the conduct of military operations process will become increasingly complex, particularly during the planning and execution phases. Operational planning relies on the main planning methodologies: the army design methodology (ADM), the military decision-making process (MDMP), and troop leadership procedures (TLP), depending on the level at which operations are conducted. However, in the context of rapidly changing situations and the uncertainty that characterizes the current operating environment, commanders and

staff are often required to use the Rapid Decision-Making and Synchronization Process (RDSP). Unlike MDMP, which aims to develop an optimal course of action, this technique is used during the execution phase to identify “timely and effective solution within the commander’s intent, mission, and concept of operations” [17]. Thus, decisions can be made quickly, facilitating the adaptation of military forces to a constantly changing battlefield.

Another factor with a significant impact on the adaptability of military forces is the flow of information, which poses challenges for both commanders and staff, as well as for the military as a whole. Information overload, slower decision-making, increased risk of errors, and high cognitive resource consumption are just a few of the negative effects caused by poor management of the information flow. In this context, the development and integration of emerging technologies, such as AI, can contribute to optimizing information processing, facilitating the decision-making process, and supporting operations.

AI has contributed to the development of dual-use capabilities, with both military and non-military applications, strategically influencing all instruments of power – PMESII. In the military domain, some of the areas of application for AI include, but are not limited to, optimizing the decision-making process, improving the precision and lethality of firepower, increasing the accuracy of intelligence, and enhancing the resilience of forces [18]. Furthermore, it is anticipated that in the future, the proliferation of AI will lead to a high level of rivalry among major powers, creating both advantages and challenges for the armed forces [19].

Another key factor shaping current and future operations, with a direct impact on the adaptability of the armed forces, is international cooperation. Multinational operations are becoming increasingly common, and within this type of operation,

particular emphasis is placed on the level of rationalization, standardization, and interoperability (RSI), which helps achieve practical cooperation and the efficient utilization of resources and capabilities [20]. The adaptability of armed forces is directly influenced by the level of interoperability, both at the technical, doctrinal, and operational levels. An interoperable alliance becomes much more effective and avoids decision-making, informational, or technological bottlenecks. Another key element in developing the adaptability of military forces is the training process, which is based on identifying and internalizing lessons learned from recent conflicts to prepare military personnel in accordance with the realities of the battlefield [21]. To address the ambiguity and uncertainty that characterize the modern operating environment, it is recommended to implement and leverage modern educational and training strategies adapted to new hybrid operational challenges, based on a specific design of the reference curriculum, teaching methodology, and online support capabilities [22].

Ultimately, the adaptability of military forces is influenced by a much broader range of enabling factors, as well as by numerous challenges, all of which act simultaneously on the armed forces. Beyond the factors analyzed above, accumulated experience and continuous learning play an essential role in developing and maintaining a high level of adaptability. Furthermore, at the level of military leaders, flexibility and simplicity in thinking and execution, maintaining a clear picture of the operating environment, critical thinking, initiative, and strategic thinking are key determinants of adaptability in complex operating environments [23]. On the other hand, the high levels of stress and pressure to which military personnel are subjected can significantly affect their ability to adapt, thereby influencing the military operations being conducted.

4. Conclusions

In conclusion, the purpose of this study was to define and illustrate the importance of military adaptability, ranging from the individual level to the allied level, as well as to identify the main enabling factors and challenges specific to it. Based on the research conducted, the proposed objectives were achieved. However, regarding the validity of the research questions, it should be noted that the subject requires further research. The information presented in this paper serves as a starting point for future studies, in which the validity of the research questions will be tested using both qualitative and quantitative methods, and concrete strategies for managing contemporary operating environments will be proposed.

Military adaptability is a necessary skill, especially for tactical leaders who often

find themselves in complex and unpredictable operational zones, where they are forced to constantly adjust their plans in response to changing circumstances.

At the same time, it is anticipated that future conflicts will be characterized by an even higher degree of complexity. The modern battlefield will be saturated with technology and cyber elements, necessitating the development of increasingly innovative strategies for mission accomplishment. Thus, adaptability must be cultivated among leaders starting in military education and then developed appropriately through experience and practice. Thus, this work contributes both theoretically and practically to refining the concept of military adaptability and to the advancement of the field of Military Sciences.

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