Following the events of 1989 a radical change of the Romanian political regime took place, a change that had as main effect the democratization of the Romanian society, with special implications of a political, economic, social and implicit military nature. From a military point of view, the Romanian Army underwent extensive transformations that took place in several successive stages. These consisted of starting the process of modernizing the military body on all levels: doctrinal and organizational changes in command and force structures, the concepts of training and their use in operations, and starting the process of replacing certain categories of equipment and some categories of weapons systems with newer and more efficient ones. All these transformations also affected the military engineering branch, in terms of the organization and attributions of the engineer command structures, as well as the structure of engineer forces, on the line of organization, endowment, training. In the following lines we will make a brief review of the transformations to which the Romanian Army was subjected, and implicitly, the military engineering command structures, in the period after 1989.

Keywords: command-control; command structures; force structure; military engineering branch.

At the end of 1989 several events took place with special implications for Romanian society. The first and most important was the replacement of the communist political regime with a democratic one, which generated ample political, economic, social, and military changes.

The reform of the military system meant "the elaboration of a concrete program, staged in time, which would modify the Romanian military body in its main components (structure, education, instruction, endowment, mode of action, mentalities). The general objective was to achieve a military force of optimal size, able to effectively serve the interests of national security and to participate in efforts to ensure cooperative security" (Defence Staff 2022).

From a military point of view, the Romanian Army went through special transformations that took place in several successive stages. These consisted primarily of doctrinal changes that established the place and role of the military in Romanian society and its responsibilities in situations of peace, crisis, and war. Secondly, the leadership structures and the force structures were reorganized.

During this period after 1989, a series of important events took place for the Romanian Army. The first of these was in 1994 when Romania signed the "Partnership for Peace" program. A second important event took place in 2002 when our country received the invitation to join the North Atlantic Alliance, along with six other Eastern European states, on the occasion of the NATO summit in Prague. Not too late, in 2004, Romania was integrated into the North Atlantic Alliance and was subsequently admitted to the European Union (2007).

Following the accession to the North Atlantic Alliance, the Romanian Army began an extensive process of doctrinal alignment in accordance with the Alliance’s regulations, followed by the transformation of command-control and force structures to ensure their adaptation to capability requirements commitments made. Following the process of transformation of the command-control structures in the Romanian Army, the transformation of the military engineering command structures took place, which is the object of our study.

Transformation of the military after 1989

The consequences of the change of political regime in Romania were also felt in the Romanian Army, thus the new strategy of defending the country was established and the role, place, and missions of
each component of the National Defence System were redefined. In this new context, the Romanian Army will successively go through several stages of restructuring, reorganization, and modernization (Gargaz, Sclipcea, Cheța, Burtan 2009, 129-136).

Thus, the first important stage was in the period 1990-1993, a stage of transition from the communist era to a democratic regime, with important consequences on the Romanian society, as well as on the military body. At this stage, measures were taken to depoliticize the military body and to reorganize some structures.

Also, the creation of the legislative and normative framework necessary for the reform of the military institution began, and an important aspect worth mentioning for this stage is the fact that measures were taken to stop the employment of military structures in carrying out various tasks in the national economy.

A second stage would be between 1993-1997, when the initial reform of the military body began. Thus, based on the General Order of the Minister of National Defence no. 24 of August 30, 1993, the Command of the Land Troops was transformed into the Staff of the Land Troops, having subordinated armies of assembled branches, educational institutions, and formations of various branches directly subordinated (Defence Staff 2022). At this stage, the Romanian 3rd Army was disbanded and Armies 1 and 2 were reorganized into army corps. On this occasion, the General Inspectorate of Military Engineering was abolished.

In 1994, Romania signed the “Partnership for Peace” program, as the first stage of the NATO integration process (Securitate prin parteneriat) (NATO 2019).

The third stage, period 1997-2000 (Gargaz, Sclipcea, Cheța, Burtan 2009, 129), is characterized by raising the degree of operationalization of operational and tactical level commands.

At this stage, several priority objectives were assumed regarding the interoperability with the NATO system and their progressive implementation took place. Units (including an engineer battalion) (Neagoe 2010, 57-59) were set up and operationalized to participate in NATO-led Partnership for Peace (PfP) missions.

Measures were also taken to reduce the number of army troops by disbanding commands, large units and units, as well as by transforming or resizing them (Portal legislativ 2022). During this period, the military engineering structures within the General Staff and the staff of the force categories were reorganized.

The fourth stage, the period 2000-2003, is the stage when the definitive reorganization and restructuring of the Romanian Army took place.

At this stage, in accordance with the Romanian Military Strategy, it was established “first of all, the realization of adequate structures, smaller in size, more compact, supple and flexible, able to be deployed quickly and able to have adequate resources to support the military effort and, secondly, to increase the quality of equipment both by modernizing part of the existing equipment and by purchasing new equipment” (Legislative portal 2021).

Following the implementation of the provisions of the new strategy, Armies 1st and 4th were transformed into Territorial Army Corps, organized into brigades.

Starting with April 11, 2000, based on the Decision of the Supreme Council of National Defence no. S-8, referring to the “Framework Plan on the process of restructuring and modernization of the Romanian Army”, the Staff of the Land Troops changes its name to the Staff of the Land Forces (Staff of the Land Forces 2022).

As for the military career, a new system of leadership training, professionalization of personnel, modernization, and standardization of training was established. We also proceeded to the elaboration of new normative acts specific to each branch (doctrines, manuals, instructions, etc.).

The next stage is the one in which the process of restructuring and modernization of the Romanian Army takes place after Romania accedes to NATO (2004-2014) and is characterized by a series of measures. Among them, we mention the adaptation of the new organizational structures of the army forces, after Romania accedes to NATO, the continuation of the reduction of troops, and the creation of a new force structure, able to ensure the country’s defence and contribute to collective defence. The transformation of the 2nd Joint Operational Command and the 1st and 4th Territorial Army Corps into Infantry Divisions and their territorial reorganization takes place. Measures are being taken to improve the regulatory framework for the professionalization of the military and also to modernize the endowment based on short,
medium, and long-term procurement programs. (Gargaz, Sclipcea, Cheța, Burtan 2009, 129).

The 2015-2021 stage was characterized by the strengthening of the defence capacity at the national level, in an allied and international context.

The national military objectives for this period were: "the development of the necessary defence capabilities; participation in the implementation of the national integrated crisis management system; strengthening Romania's military profile within international organizations and regional initiatives; increasing the allied presence on the national territory; strengthening military cooperation in strategic partnerships; development of cooperation initiatives and partnerships with the armies of neighboring states" (Legislative portal 2021).

It should be mentioned that in this last stage, several commands of large multinational units were set up in Romania, namely the Command of the South-East Multinational Corps, the Command of the South-East Multinational Division, and the Command of the South-East Multinational Brigade.

Reform of military engineering command structures

At the end of 1989, the military engineering branch was led by the Military Engineering Troops Command, which had a complex structure capable of handling all branch issues. The Command was headed by a Commander, Major General Gheorghe Popescu, who was subordinated to the Staff (organized by sections), the Political Council, the Combat Training and Education Section, the Technical Service (organized by sections and offices), the Financial Service Officer, Personnel Office, Service and Accommodation Officer, Chief Medical Officer, Secretarial Office, Command Train Statute, Section for the management and coordination of works on the Bucharest-Danube waterway and road and railway works (organized by offices), Section for leading and coordinating the works on the Danube-Black Sea and White Gate-Midia-Năvodari canal (organized in offices) and the Scientific Research and Technical Design Engineering Workshop (Commandment of the Military Engineering Troops 1993).

Based on the provisions of some Annual framework plans for the reorganization of the army, since 1990 major changes have taken place regarding the entire Romanian Army, implicitly the leadership structures of the military engineering branch, as well as the units and large units of engineers (Land Forces Staff 2022).

The first important measure taken after the beginning of 1990 was the abolition of all elements belonging to the political party apparatus, within all leadership structures at all hierarchical levels, as well as within the troops.

In the next period, command structures and some large units that were engaged in works performed within the national economy began to be dismantled. Thus, between February and March 1990, the Directorate for Works in the National Economy and the Directorate for the Construction of Irrigation Works were abolished (Gargaz, Sclipcea, Cheța, Burtan 2009, 129).

Starting with August 1, 1990, based on the Order of the Minister of National Defence M.102 of July 30, 1990, the Military Engineering Troops Command was transformed into the Military Engineering Inspectorate and became directly subordinated to the Land Troops Command (Land Forces Staff 2022).

Based on the approval of the Minister of National Defence on the Report of the Commander of the Land Troops no. S. 4856 of November 10, 1990, the Military Engineering Inspectorate starting with December, 1990 changed its name to the Military Engineering General Inspectorate. It was sized according to the needs of the branch and had the following organization: Chief-Inspector General MajGen Gheorghe Popescu, seconded by a Chief of Staff (who was also the first deputy inspector), under whose subordination were sections and offices. Subordinate to the Inspector General was also the Deputy for combat training and education, which in turn was subordinated to sections and offices. Also under the subordination of the Inspector General were the Technical Service, which organized sections and offices, the Roads, Bridges and Railways Works Department, the Chief Physician, the Personnel Office, the Financial Accounting Office, and the Secret Documents Department (Commandment of the Military Engineering Troops 1993).

Based on the General Order of the Minister of National Defence no. 24 of August 30, 1993 of the Minister of National Defence, the Military Engineering General Inspectorate ceased its activity starting with November 30, 1993 at 24.00.
Starting with December 1, 1993, the civilian staff and employees of the Military Engineering General Inspectorate were included in the structures of the Great Staff and the Staff of the Land Troops (Commandment of the Military Engineering Troops 1993). Thus, the military engineering command structures were reorganized and the Inspector of Military Engineering was appointed to the Great Staff (in 1994 the name was changed to General Staff), with 10 men under his command, under the command of Brigadier General Constantin Stânciugelu and Chief of Military Engineering to the Staff of the Land Troops, subordinating 10 people, under the leadership of Colonel Mircea Sclipcea (Gargaz, Sclipcea, Cheța, Burtan 2009, 130).

As a result of the mentioned transformations, at the end of 1995, at the level of the Romanian Army, the military engineering branch had the following organization: at the General Staff, there was the Inspector of Military Engineering, at the Staff of the Land Troops there was a military engineering command structure led by a Chief of Military Engineering with the rank of colonel, at the level of 1st, 2nd and 4th Armies there was also a military engineering command structure led by a chief of military engineering with the rank of colonel.

Starting with Aprilie 1, 1998, the structures of the Inspector of Military Engineering/General Staff and Chief of Military Engineering/Staff of the Land Troops were abolished, in their place being constituted within the same commands, the Military Engineering Section/Doctrine and Instruction Directorate under the leadership of Colonel Constantin Teodorescu, respectively the Military Engineering Office/Combat Training Directorate under the leadership of Colonel Alexandru Rusu (after the dissolution of the Military Engineering Section/General Staff in 2001, this structure took over the coordination of the issue regarding the structural organization of principle, the training of staff and the training of engineering units in the land forces) (Gargaz, Sclipcea, Cheța, Burtan 2009, 130).

On March 10, 2003, at the level of the Land Forces Staff (based on the CSAT Decision no. S-8 of 11 April, 2000, the name of the Ground Troops Staff was changed to Land Forces Staff) (Land Forces Staff 2022), the institution of the Military Engineering Inspector was reorganized, whose prerogatives, for the military engineering branch, were assigned to the commander of the Râmnicu Vâlcea the Application School of Engineering and Railway, and mainly aimed at design and application of the doctrine and development policies of the military engineering branch; elaboration of normative acts specific to the organization, development, and control of military training and education; applied scientific research at the level of the branch.

Later, in 2006, the Instructions on the institution of the Land Forces Inspector (Land Forces Staff 2006), were drafted and approved at the level of the land forces, which regulated the main duties of the inspector in the line of branch. These were the following: "he elaborates the project of development/modernization of the branch; manages the training system of the branch training center personnel; leads the process of accepting NATO standards and is responsible for their implementation in specific normative acts and branch manuals; coordinates the process of collecting data, conclusions, and proposals resulting from the activities carried out on the branch line; promotes the results of the engineer branch in the media; coordinates the various scientific research works on the line of branch; identifies the need for new types of branch-specific equipment, weapons, equipment, and materials; organizes and carries out control activities in large units and units where there are branch structures.”

In 2008, military education was reorganized and the branch-specific educational institution was renamed the CBRN, Engineering, EOD, and Defence Training Center. On this occasion, the position of branch inspector was abolished (Marin 2013, 4).

At the end of 2012, the Chief of Staff of the Land Forces issued the SMFT Order 21 of 4 October, 2012 on the institution of the Land Forces Inspector in order to revitalize this institution (Marin 2013, 4).

According to this order, the duties of the inspector were as follows: "development and modernization of the branch; the elaboration of specific normative acts and military manuals; instruction and education; endowment with new types of weapons, equipment, and specific materials; applied research in branch; promoting the image of the land forces; arms-specific international relations”.
Also by this order, the Chief of Staff of the Land Forces there was established as an inspector for the military engineering branch, the commander of the Training Center for Engineering, EOD and CBRN Defence “Panait Donici”, who coordinated and contributed, in collaboration with the Chief of the Engineering Office from the Land Forces Staff, with specialist officers from the infantry divisions and from the 10th Engineer Brigade, to develop the Branch Development Concept and the Medium and Long Term Branch Development/Modernization Program. The center also housed the Armed Forces Research, Development, and Regulations Department, which was the main execution structure available to the branch inspector.

During this period, the engineering branch inspector, personally or through subordinates, collaborated in a specialized line with the NATO Centers of Excellence for Engineering and EOD, with various military educational institutions in the country and abroad and participated in several multinational exercises organized where military engineering structures were involved, thus ensuring the development of branch-specific international relations.

As for the military engineering command structures, they were reorganized and contributed to the leadership and coordination of all activities carried out on the line of the military engineering branch. Thus, at the General Staff, which later became the General Staff of the Defence, the EOD Office was set up in March 2003. From March 2008 to April 2010 it functioned as the Support and Protection Office, and from April 2011 it was reorganized as the EOD (Explosive Ordnance Disposal) and C-IED (Counter Improvised Explosive Devices) Office, which a year later, in 2015, became the Engineering, EOD, and C-IED Office. Also, at the level of the Staff of Land Forces and the Staff of Air Force there were the Engineering and EOD Offices, and at the Staff of Naval Forces an EOD Office.

During this period, the personnel who assigned the military engineering command structures were actively involved in organizing, leading, and coordinating the activities organized on the line of branch, the multinational exercises Resolute Castle and IEL MILU, contributed to the planning of actions of engineer structures, leadership and their coordination for Saber Guardian and Dacia 21 field strength exercises, inspection of units and large units of military engineering, verification of the EOD combat service, elaboration of doctrines, instructions and manuals on the branch line, elaboration and validation of EOD technical procedures, collaboration with the Centers of Excellence for Engineering in Germany, EOD in Slovakia and C-IED in Spain. Personnel from these command structures also participated in missions in theaters of operations and held positions in NATO commands.

At this time, in the organization of the Romanian Army commands, at the strategic, operational, and tactical levels (division commands), there are military engineering command structures, offices, and compartments, and at the level of the mechanized brigade staff, within the operations sections, there is a position of engineer officer.

The general attributions of the military engineering command structures in the organization of the Romanian Army at this date are the following: elaboration of policies, concepts, and doctrines on the line of engineering, EOD, and C-IED; providing advice and expertise for commanders, on a specialized line; contributions to the development of various plans and orders; database management with specific information; cooperation with NATO Centers of Excellence in Engineering, EOD and C-IED; coordinating engineering support in areas of responsibility and operations; participation in control teams in engineering units; contributions to the planning, organization, leadership, and coordination of national and multinational exercises, etc.

Conclusions
The year 1989 marked – for the military engineering branch, as well as for the entire Army – an extensive process of transformation and reorganization. The reform of the military system was achieved through the implementation of a staged plan, which consisted of doctrinal, organizational, and structural changes, endowment, education, training. At the same time, the reorganization of the military command structures, as well as the large units and units of military engineering, was carried out.

Following the accession to the North Atlantic Alliance, the Romanian Army began the doctrinal alignment in accordance with the regulations of the Alliance, followed by the transformation of
command-control and force structures, to ensure their adaptation to capability requirements, in accordance with commitments. Following the process of transformation of the command-control structures in the Romanian Army, the transformation of the military engineering command structures took place. However, this was not done in accordance with NATO’s doctrinal provisions, as a different organizational system was adopted. At this time, there are military engineering command structures, but they are undersized and manage to handle all areas of engineering support, as well as peacetime counseling/expertise, during the operational planning process, and even more so for other more important situations. On the other hand, the role of these command structures is not limited to advising commanders but consists in estimating the needs of engineering support, resource planning, and their judicious allocation to supported units, which requires a large and specialized staff.

At the moment, in accordance with the provisions of the new strategies, the process of transformation of the Romanian Army is underway, simultaneously with the one carried out within NATO, on which occasion the military engineering command structures can be reorganized and resized to be able to manage corresponding to the complex issues of the branch, on all lines: planning and operational leadership, intelligence, infrastructure, EOD and contributions to the protection of forces, environmental protection, C-IED.

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