WARFARE ISSUES AND SCIENCE

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Abstract: *Concerns regarding the analysis of the issue of war have been a constant throughout history. The Romanian Academy of Sciences, even in difficult conditions, during the Second World War, organized various scientific events in which distinguished personalities of the time presented their positions full of suggestions and teachings, some of which are still very relevant today, thus: strategic surprise, the technical side of war, wartime nutrition, wartime nervous diseases, war and peace education, the problem of propaganda, lessons from the conduct of war, etc.*

Keywords: *war, science, war economy, teaching of the warfare, scientific communications, The Romanian Academy of Sciences.*

We titled this article similar to the title of the volume of the series of conferences held between October 15, 1941 and June 1, 1942, presented by the Romanian Academy of Sciences (RAS) and published in BULLETIN No. 10 of NOVEMBER 1, 1942. In this article we will make some references to some of the 30 communications considering the scientific value, but also the topicality of the conclusions and proposals formulated. All communications are very important, but we stopped only where we have the necessary skills.

From the study of the volume published by "CARTEA ROMĀNEASCĂ", ROMANIA -1943, one can see the desire of the RAS to give, in the midst of the war, a new impetus to the scientific movement in Romania and to make available to the military leadership structures scientific research that would optimize the organization and the conduct of military actions, but also suggestions for the post-conflict period.

In his conference entitled "THE WESTERN FRONT: THE SURPRISE OF THE MATERIAL. STRATEGIC SURPRISE", General ST.

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BURILEANU, representative of the Military Genius Section, presents some lessons, which are very topical even today, as follows:

- the form of struggle for the defense of our country is the offensive carried out against an enemy with whom we can measure ourselves, both quantitatively and qualitatively, either in alliance with a strong state against a strong enemy;
- the need to develop our own metallurgical industry in order to equip motor-mechanization, especially when we can only count on ourselves;
- the human factor is the most important factor in obtaining victories with all the technical evolution, a truth demonstrated in all wars throughout time.

Particularly interesting are the teachings highlighted by Commander PhD.Eng. I. LINTES in the communication "SOME TECHNICAL NEWS FROM THE CURRENT WAR", namely:

- distrust in one's own technique, even if it is not of the best quality, leads to discouragement, with serious consequences regarding the final outcome of any war;
- the non-existence of a Technical General Staff brought many damages to our technique and this with major implications in equipping the army as a result of a lack of coordination in planning, organizing and carrying out the production activity for the war;
- the exaggerated influence of foreignness, and especially of a certain foreignness, did not allow the creation of a national technical heritage, and that is why external deceptions and internal naiveties cost us dearly, the equipment of our army suffering several times;
- courage and determination in the technical field were not taken into account, the correct initiatives were not promoted, and a harmful conservatism was maintained;
- bosses must look only at the details at the level of their decision-making power and not at the specific details of subordinates;
- for small things unnecessary complications and formalities must be removed because time is consumed unnecessarily and decisions contain useless elements.

Colonel PhD. chemist I.D. BĂRDAN, in the communication "THE ROLE OF THE CHEMICAL INDUSTRY IN NATIONAL DEFENSE"

presents some conclusions of great scientific and pragmatic value, but especially of great relevance. How could a political-military decision maker be insensitive to the author's following conclusions:

- the chemical industry participates substantially in the national defense during war both through the production before the war, but also through the production during the military actions;
- the chemical industry must be established in peacetime so that it can produce the elements needed for war without being dependent on imports;
- the chemical industry should be able to produce powders, explosives, fumigants, incendiary substances, etc. for the creation of reserves since peacetime and to a greater extent during war;
- to encourage, through various forms, by the government, the establishment of production units in the field of the chemical industry to ensure what the army needs;
- to pay more attention to meeting the needs of the chemical industry for the first and foremost capitalization of own resources and only in case of total lack to resort to imports;
- to create stocks of raw materials, in peacetime, for at least 6 months of war, starting from the assessment of the intensity of a possible war, but also from the analysis of possible adversaries.

The author finally points out that no sacrifice is too great for the preparation of national defense.

Prof. ION ATANASIU in the communication "SOME DEPOSITS OF SUBSTANCES WHOSE EXPLOITATION COULD BE ATTEMPTED DURING THE CRISIS DUE TO THE WAR" supports an appreciation with an important connotation for military power. Thus, if in peacetime the unprofitable exploitation of a deposit of mineral substances cannot be taken into account, in wartime the necessity prevails and not profitability. Regardless of the price, if the needs of the war call for unprofitable exploitations, they must be done. Starting from the war economy, the author presents a list of some deposits of certain mineral substances that could be exploited here: fluorine, bromine, iodine, tellurium, phosphorus, arsenic, strontium, chromium, molybdenum and bismuth. It is noted that these are rare elements, but very necessary in the production of military equipment.

In "THE PROBLEM OF FOOD IN WARTIME", Prof. IULIU VOICU shows how through a rational diet, even more so in wartime, a good physical, intellectual and moral condition can be ensured, whether the army is in mind from the front, be it the population behind the front. According to the author, the food problem involves two aspects, namely one material and one educational. The material aspect aims to ensure the amount of products for the population, an aspect that in times of war can have some problems, and the educational aspect aims to spread knowledge about good nutrition. The educational aspect is of much greater importance in wartime than in peacetime because the rational preparation of menus is of greater importance, but also for the maximum use of the value of food products. Also interesting is the scientific assessment from which it follows that a soldier needs, in peacetime, at least 3400 calories per day, and in wartime at least 3800 calories. In wartime, the decision makers aim for the nutritional value of food to be as high as possible, but also for the nutritional value to be used in the best conditions in order to achieve maximum physical and moral effort.

The scientific communication "OBSERVATIONS AND LESSONS FROM THE CURRENT WAR" by Dr. VICTOR GOMOIU is also particularly valuable. The author pays tribute to RAS for its involvement in issues of scientific and national interest. We sit and ask ourselves, although we will also make some remarks at the end, what is the scientific value and the level of patriotism of those contemporaries who make insulting assessments of this high scientific forum?

It is unfortunate that the observations and lessons of past wars were not always heeded by posterity and therefore the demands of the war were considered as something new, which allowed the same mistakes to be repeated. The doctor has important reservations regarding the permanent reporting of the number of "seriously" or "lightly" wounded, but also of the "big" or "small" activities carried out in each hospital, considering that such reports can be very relative during the war and lead to a bureaucracy that diminishes the efficiency of the medical act.

In his scientific communication "SPECIFIC CHARACTERISTICS OF THE CURRENT WAR ECONOMY", COSTIN C KIRIȚESCU makes an objective analysis of the role that economic factors have in provoking a war, but also in its conduct, emphasizing that economic issues are at the

forefront. The more the technique of war progresses, the more the role of economic factors increases. The economy is responsible for how a war ends. Both the conduct of war and its doctrine require a certain economy of war. For argumentation, the author makes a parallel between the aspect of war and the aspect of the economy in different historical stages. For example, in ancient times, peoples living from agriculture fought for the increase of arable land, and those engaged in trade fought for the protection of trade routes and for new trade routes or trade goods and especially grain. Also in antiquity, wars had an extensive character as a result of the lack of iron and coal. And in the feudal age, the character of war is economically determined, but war also determines the war economy. Units begin to form from the earnings of fiefdoms and seniors, and the war is fought over limited territories, with the economy being affected only in smaller territories.

There was also the stage of mercenary armies, which, however, required very high financial expenses, and the expenses influenced the size and equipment of these armies. These armies did not fight out of patriotism but only for financial gains.

Next, the close connection between the economy and the war was found, but the first world war highlighted for the first time the true share of the close connection between the economy and the army, in fact the organic connection between the productive activity and the war was anticipated already in the previous century. The beginning of the First World War surprised some states without an economic preparation for the war corresponding to the military preparation. There were two reasons that led to such a situation:

- distrust in a long-lasting war;
- the mentality of the Western economic and political system in the sense of not subordinating personal interests to collective ones.

In the communication it is claimed that the lack of an Economic General Staff was felt to coordinate all sectors of the war economy. Due to this fact, the economic organization was, during the First World War, following the military actions.. first the problems for the conduct of the war appeared and then solutions were sought in the economy.

The lessons learned from the analysis of the relationship between economic activity and war activity were used in the period between the two world wars.

Ever since the Second World War, a natural question has arisen: what should be the moment to start applying the measures necessary for the economic support of the war?

There were two options:

- the economy of a country should be prepared before the start of the war;
- at the start of the war, the economy should immediately switch to the production established according to a peacetime plan.

Communication presents very transient aspects. The economy must be at a stage that is able to optimally support a war. For this in the national economy to receive the higher interests of the state and not the individual ones. For this the state must direct production, consumption, exchanges and prices. Through the directed economy, materials can be created ahead of time to wage a possible war. The success of the war economy depends not only on leadership and organization but, to a large extent, on the support of the entire population. It must, consciously, accept the primacy of the general interest over the particular ones. Current is also the reference to the restriction of civilian consumption through rationalizations without using an antisocial means, namely inflation, which is the least advisable because only the least well-off population is eliminated from consumption.

Starting from the character of the war of movement, the notion of front is outdated. Under these conditions, the transport element takes precedence both for the movement of troops and for making supplies. For efficient transport, infrastructure elements (communication paths and works of art) are needed, but also superstructure - vehicles.

In the communication "PUBLIC FINANCES IN THE CURRENT WAR", the Director General of the House of Deposits and Consignments - VASILE VASILIU analyzes this important issue in the preparation phase of the ongoing war, namely the financing of the endowment for the raaba. In the analysis made, three phases are presented in the endowment effort:

- endowment through loans opened annually at the Department of the Army;
- establishment of a "Special Fund for National Defense";

- the transformation of the "Fund" into the "Budget for the National Defense Fund".

The author envisages the use of available resources in two ways:

- facilitation of deposits in large public credit institutions, but mainly through time deposits;

- the issuance of certificates by the previously mentioned institutions, which can be reimbursed between 1-5 years with appropriate interest and circulation; these certificates must not end up in the National Bank's portfolio.

All communications are absolutely valuable, but through the lens of the analysis made by us we also evoke:

- "THE ECONOMIC ORGANIZATION OF EUROPE AFTER THE WAR AND THE BASIS OF INTERNATIONAL COLLABORATION" - Prof. GH. N. LEON;

- "INVALIDS OF WAR" - PhD. AUREL VOINA;

- "THE PROBLEM OF PROPAGANDA" - Prof. ION ZAMFIRESCU;

- "WAR AND PEACE EDUCATION"-Prof. C. NARLY.

CONCLUSIONS

Through this article we wanted to show that the evolution of the Romanian Academy of Sciences, established in 2007, has a special tradition, being the successor and sole legatee of the Romanian Academy of Sciences (1935-1948) and of the Association of Romanian Scientists established in 1956. Starting from 1935, regardless of its name and organization, the Romanian Academy of Scientists has contributed substantially to the development of science in our country. This institution was and is at the center of society and, through education, science and knowledge, participates in the progress of Romanian society and the development of Romania.

Those who question, out of bad faith or ignorance, the role of the Romanian Academy of Scientists would do well to at least read the volume "PROBLEMS OF WAR AND SCIENCE", which includes the 30 conferences presented in the period 1941-1942, by great personalities scientific value.

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