



### Philosophical hypotheses of social sciences

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Philosophical hypotheses of scientific research are threefold: 1) *ontological*, on the nature of the researched objective reality; 2) *epistemological*, on possibilities and methods of cognizance; and 3) *axiological*, on principles of values which give sense to a research project.

The most important factor in *ontological* hypotheses is the direct insight into the existence and structure of objective reality, attained owing to the practice, changed and transformed by human activities. The practice is possible because in the world exist an established order, laws that regulate the flow of occurrences, causes that result in certain occurrences and processes, and objective possibilities for our influencing the development of different processes and effecting events and developments that would not occur without our action.

The essential *epistemological* hypothesis is that by application of certain methods of research we can establish the *truth*, i.e. knowledge adequate to the structure of objective reality. This knowledge is reached by the proper application of empirical and theoretical methods: establishment of facts, formulation of theories explaining these facts, checking and testing these theories in practice, and their interconnection into systems.

Scientific researches are not neutrally valued. They should include also *criticism* of everything which is in the practice inhuman, irrational and evil. Such criticism is based on certain axiological principles, which give the essential meaning to our intellectual efforts and our overall practical engagement. The most significant among these values and hypotheses are those that contain and are built up around the following principles: survival of man, development of humanity, creativeness of man, his freedom, development of arts, and creation and maintenance of equal conditions for utilization and development of human potentials, both in terms of individuals and of human communities. Values can have in everyday life, in ideology and politics a limited and specific character. Values by which the science is oriented should have a general human and ethnical character.

### Military scientific research in the Yugoslav Army

D Sc Svetomir Minić, Colonel, M Sc Dragoslav Živković, Colonel, Ivica Jović, Colonel

In this report are reviewed relevant aspects of scientific research activities in the Yugoslav Army, as a complex administrative-planning and expert function performed at the levels of Federal Defence Ministry and

the General Staff of the Yugoslav Army, as well as in all units and establishments of the Army. These activities have been reviewed by their separate functions: scientific-research work, expert assessment of the programme of development of the Yugoslav Army, and inventional activities in the Army. Characteristics of the present state of affairs in this domain have been presented and functions of the scientific research activities described from the aspect of systemic solutions of planning, administration, organization and effectuation. Basic problems have been identified and manners in which they could be solved suggested. The authors point out that science is one of the basic factors of the military power of the country, and that the level of its development realistically shows the value of each of significant parameters of that power, thus also showing the powerful interaction between the development of the Yugoslav Army and the scientific research support of this development.

Scientific research activities in the Yugoslav Army are being conducted as organized and systematic researches, development and application of most modern scientific-technical attainments in all scientific fields significant for the defence of the country, with the aim of finding out most favourable and suitable solutions, and of reaching higher levels of combat readiness of the Yugoslav Army. Because science is a reliable footing at all decision-making levels when systemic solutions and decisions significant for further development of the Army are to be reached.

The authors point out the need for the establishment of strategic directions for further development of scientific research activities in all scientific fields. The defence of the country must be founded upon a powerful and organized science, highly professional personnel, high quality material basis, well organized applied researches, and implementation of results of these researches. The need exists that the administrative-planning and expert functions of the scientific research work in the Yugoslav Army be conducted at the General Staff level, by a separate department. This department would promptly offer the military leadership of the country corresponding right solutions for all fields of activities in the domain of science, and present objective and unbiased assessments of significant programmes of development of the Yugoslav Army, based on scientific and expert attainments in the world, with the aim of implementation of these programmes with the minimum of risk and with most productive effects of financial investments.

The authors also point out the necessity of building-up of superstructure of the existing organization of scientific research activities, particularly in the field of the art of war, and of the establishment of efficient cooperation between the art of war and technical sciences. The existing scientific research and development capacities must be preserved, in order that our own development and production of armaments and military equipment could be effectuated. The nucleus of the scientific research personnel has been preserved, also a solid material basis of the scientific research work, whose qualities should be retained, with the modernization and development of the information support system.

Scientific research work in the Yugoslav Army offers an efficient support to the development of this Army and makes a basic condition on which depends the attainment of our strategic goals of creation of a modern, modernly organized, equipped and trained Army.

## The idea of the system of military sciences

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M Sc Dušan Višnjić, Colonel, M Sc Jan Marček, Lt. Colonel, M Sc Mitar Kovač, Major

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The systemic nature of military scientific knowledge and criteria for its classification, as well as the place of military sciences and their disciplines in the domain of sciences and scientific fields in society, are in scientific and expert circles of the Army viewed differently. In these considerations are oftenly posed questions regarding the scientific foundation of polemology, its systemic elaboration and its place in the system of military sciences, as well as regarding its relation with other sciences and scientific fields in society.

In the article an attempt has been made to define the notion of the system of military sciences, to establish criteria for classification of military sciences and their different disciplines, their interrelations and relations with sciences in society. In connection with this, the system of military sciences is an instrumentally-rational and functional scientific system of mutually linked sciences and scientific disciplines which only have in common their field of research (specific problems of military activities), while leaning in everything else rather on their mother-sciences than on the other military sciences and their disciplines. Starting from this point of departure, classification of the system of military sciences can be worked out according to a unique criterion of pertaining of their mother-sciences to different scientific fields in society. According to this criterion, military sciences and scientific disciplines can be included into the following military scientific fields: military-social and humanitarian, military technical, military natural and mathematical, and military medical. Their place in sciences in society is in this manner indirectly established.

## Criteria for classification of military sciences

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D Sc Momčilo Sakan, Colonel

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In this report attention is drawn to three significant groups of questions regarding the classification and identification of military sciences. The first concerns the ethical and methodological-epistemological difficulties, the second deals with problems of identification of classification criteria, and the third with the most favourable variant of classification of military sciences.

Basic difficulties of ethical nature appear as mutually conflicting individual, group and general interests. Individual and group interests oftenly gain in this conflict greater significance, which leads to neglecting the general interests of military sciences. Overcoming of such conflicts implies the impartiality of researches, and a readiness to submit own theory to most rigorous tests and, in case of its failure, to abandon it regardless of own interests and present status of the researcher. Epistemological-methodological difficulties most oftenly result from insufficient appreciation of dialectical unity of methodological essentialism and nominalism.

Basic criteria for classification of military sciences are: generalization, nature of the object of a science, interconnection of sciences and scientific

disciplines, rationalism, significance of the science, current practice, pragmatism, similarities and differences, association with mother-sciences, and level of development of constituents of the science. Since, however, neither of these criteria individually suffices for a right classification of military sciences, a multi-criteria approach is proposed, which should ensure a pragmatism, rational and effective organization of military sciences. Such an approach results in a conclusion that military sciences are: strategy, operational art and tactics, i.e. those sciences which have been, according to conventional solutions, considered heretofore scientific disciplines of the art of war.

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## Military-social scientific disciplines and their places in the system of military sciences and in scientific fields in society

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Group of authors

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In this paper are briefly analysed certain military-social scientific disciplines which are according to the existing official classification of military sciences included into that group of scientific disciplines: military sociology, military economy, military psychology, military andragogy, military history, and military geography, which is considered, because of its object of research and its objective place in the system of military sciences, to belong both in the group of military-social and in the group of military-natural scientific disciplines.

The paper is the result of work of several authors competent in their military-scientific disciplines. Each of them starts from the fact that war as a social conflict is in essence a total social phenomenon. From this objective fact ensue the place and significance of each of individually analysed military-social scientific discipline, and of all these disciplines for the scientific foundation and development of the military science. All the analysed military-social scientific disciplines constitute in the system of social sciences significant specific scientific disciplines of corresponding social sciences and contribute to their scientific consistency.

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## Scientific foundation of polemology and the art of war

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M Sc Dragiša Antonijević, Colonel, M Sc Mitar Kovač, Major

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Depending on the state and the Army, the art of war is constituted and treated differently – as craftsmanship, skill, science, theory and practice, and science and practice. In many centuries of its development the art of war produced a range of theoretical and methodological perceptions, by which the relation between the science and military trade in the armed struggle, i.e. between polemology and the art of war can be satisfactorily described. Views concerning the art of war, as the universal science on the armed struggle, have been to date most controversial with regard to the level of development of its constituent elements, because of the lack of discrimination between the objects, theory and methods of this science and

trade, as well as of non-existence of arguments for its systematism in the domain of science. Expert and doctrinary theory on the art of war is in most of the armies of the world trying to establish itself as a scientific theory. Therefore are certain laws, regularities and results of researches not easily identified in the overall fund of knowledge on the art of war.

The art of war, as a notion, denotes the expert sphere of military activities in the domain of preparations of every Army for the armed struggle. It has therefore a local character and is called „ours“, „yours“, regional, of a bloc of states, etc. Thus is the problem of systematization of the art of war reduced basically to the levels of its being practiced or applied in the armed struggle.

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## Scientific foundations of combat support service – logistics

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Konstantin Arsenović, Major General, M Sc Radovan Tomanović, Major General

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The growing significance and actualness of comprehensive studying of combat service support and logistics make a sufficient challenge for a discussion on combat service support, polemology and military trade. In methodological and epistemological analyses of polemology and military trade is usually seen that they are burdened with numerous cognitive problems that emerged because of disagreements in definition of the military trade and its scientific disciplines, among which is also the combat service support.

Although in the combat service support, polemology and military trade are expressed common interests, always exists also the demand for own legitimacy, which comprises the request for proving the rightfulness of each of these interests.

Combat service support, i.e. logistics, has its own theory, language, object and methods, and is closely linked also with constituents from the domains of other military scientific disciplines – polemology and the military skill.

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## Military technical sciences and scientific disciplines, their relationship with other sciences within the system of military sciences in society

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D Sc Radovan Maksić, Colonel

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Military technical sciences have contributed to the equipment of the Army with matériel and to shaping the influence of the material-technical factor of the armed struggle. The development of these sciences is in modern armed forces bestowed a great significance, with corresponding investments into research personnel and material support of researches. The approach to military technical sciences and to classification of their disciplines has varied according to the set goals, while the contents and methods have been developed according to attainments in military, natural and social sciences, and to technological and information knowledge, also to the situation in the existing environment.

Inevitability of integration of knowledges demands also the existence of links with the general military and other sciences. Interdependence of different fields and synergetic action of scientific disciplines emerge in the processes of solution of classes and groups of problems in which the basic knowledge stems from the domain of military technical sciences. Problems connected with the military technical and military organizational-technologic systems have been solved together with creation of original methodologies and building up of specific terminology. The establishment of laws of spending resources in combat operations, and of optimization of control over different systems, also creation of technical and expert systems, have been effected on the basis of knowledges contained in military technical sciences, which are being constantly built-up in inter-action with other sciences. Disciplines of military technical sciences are being developed mostly in three domains: organizational-logistic, design-technical, and technological. Development of these domains and transfer of new knowledges and methodologies can be ensured by planned policy within the framework of a state plan, by orientation to creation and development of own expert personnel, and by organization of different chairs in the Military Technical Academy of the Yugoslav Army, as basic scientific-instruction cells.

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## Contents of the military doctrine, method (manner) of its formulation, and its application

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D Sc Spasoje Mučibabić, Colonel

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In the first part of this report are explained basic views on the multidimensional aggression and on the military science as the basis for identification and elaboration of military doctrine. Particularly are listed characteristics of the armed struggle as a situation of conflict. By its specificity it presents to the military science and doctrine an object of research which is not constant but undergoes considerable changes, giving a significant place to non-armed forms.

The second part deals with the definition of contents of military doctrine as a system, whereat relations between its inputs and desired outputs are stressed, with the gravity point placed on certain questions in the fields of command and control and combat readiness.

In the third part is worked out the manner in which the existing doctrinal problems are being solved, and it contains demands for finding out specific methods and procedures that, with all the existing limitations, must ensure pragmatic results and be relatively cheap.

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## Social origins of military doctrine

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D Sc, Lect., Milinko Stišović, Colonel

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On the basis of analyses of numerous sources is concluded that different views exist regarding origins of the military doctrine that influence its classification structure and contents, and the significance of its individual

factors. Differences in apprehension of origins of the military doctrine stem primarily from its insufficient theoretical development. Therefore appear difficulties in classification of social and scientific origins of the doctrine, as well as in gauging the degree of impact of individual factors on its build-up.

In order to respect the methodological correctness, the author starts from the ethimological meaning of terms: origin, foundation and point of view. According to the semantic analysis, „origins“ of the military doctrine can be preliminary taken as its points of departure, foundations from which it commences or ensues – all of these analysed in the paper. Origins of the military doctrine can be taken as social and scientific ones. Social origins encompass a wider complex of different values, factors, systems and other parameters, such as: 1) state and national interests and goals; 2) state doctrine; 3) geopolitical position of the state; 4) economic power of the state; 5) technical-technological development; 6) demographic factor; 7) state of the Army; 8) educational system; 9) political system; 10) jurisprudence system; 11) traditions of the people and state; 12) military alliances; 13) ratified international agreements and ensuing limitations; 14) military doctrines of coalitions, great powers and neighbouring countries; and the like. In the paper have only been analysed some of these social origins of the military doctrine.

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## International policy and political doctrine of federal Republic Yugoslavia

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Prof. D Sc Predrag Simić

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The discontinuation of the „cold war“ and the disintegration of the bipolar system of international relations in Europe, by the end of the eighties, significantly influenced the international developments in SFR Yugoslavia and its international position. In a new European geopolitics SFR Yugoslavia lost its significance of a „strategic buffer-zone“ situated between two military-political blocs of states, while the unification of Germany set the foundation for a new system of international relations in the European continent, in which SFR Yugoslavia found itself at its south-eastern periphery. This change was a powerful incentive for centrifugal tendencies and nationalism of western Yugoslav constituent republics, which started on their paths of secession, explaining it by their wish to „escape from the Balkans“ and to join the central Europe. Consequences of such developments were the most grave internal armed conflicts in a country of the European continent after the Second World War, return of political force to the Balkans, disintegration of SFR Yugoslavia and fragmentation of the entire south-eastern Europe, whereby emerged numerous ethnical, territorial and other kinds of disputes, or „re-balkanization of the Balkans“, with direct consequences for security of entire Europe and the Mediterranean region.

Developments and events in the Balkans, and in a wider sense in the entire Eastern Europe, had a direct impact on the prevailing theories and doctrines in international relations.

Namely, in the late eighties in the Western Europe and the USA prevailed an idea of „the end of history“, according to which the fall of the

Eastern bloc of states should finally bring the countries of the European East back to the European civilization, defined in terms of capitalist economy, political pluralism and other values of the West. The doctrine of liberalism, or Wilsonian liberalism, at that time prevailed over the view that „democracies do not make wars“ (at least not between themselves), and that well ordered countries tend to maintain peace-loving and cooperative international relations. The message of such ideas and views that the doors of western institutions is, in principle, open to every newcomer state that accepts such conditions and passes a period of transition from its previous socialist to the capitalistic and bourgeois social order. Soon after the disintegration of the Soviet Union and the definitive disappearance of the „Soviet threat“, in the West prevailed the idea of a possible conflict between civilizations, based on the thesis that all peoples cannot accept the western system of values, and therefore cannot be included into the institutions of the West. In other words, in Europe is gradually being drawn a new line of demarkation, which is now not called the „iron curtain“ but is frequently mentioned as the „golden curtain“.

In accordance with these changes in doctrines and practice in modern international relations, also the position of Yugoslavia has changed. It has been at first, as a previous strategic „buffer-zone“, pushed to the margins, to start only lately to gain in importance as a geographically and geostrategically central country of the Southeastern Europe. In connection with this is unavoidable to make a thorough revision of the former foreign policy of Yugoslavia, which was based on premises of bipolar order in Europe, and to develop a new doctrine which will assess the significance of a new geopolitical and geoeconomic position of Yugoslavia and, on such a foundation, define the future external political strategy of the country. To the Yugoslav science is, additionally, imposed the solution of a serious problem of comparative studying the range of the process of transition in countries of Eastern Europe, from the standpoint of its significance for the strategy of development of this country. In this task cannot be left out the science on international relations, which both theoretically and practically must find answers to these questions, and offer the political factors in the country realistic options and strategies of internal development and foreign policy of the country. Of a particular significance are thereat those aspects of the new geopolitical and geoeconomic position of the country which influence and continue to influence its security, also the analysis of potential military or non-military threats to the security of FR Yugoslavia.

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## Relationship between economic and military sciences

M Sc Ljubivoje Prvulović

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Significance of economy, i. e. of the state of affairs in economy of a country, for its security was for a long time on the fringe of scientific and expert researches. The relationship between economy and military complex was researched mostly with a view of spending of means from the state

budget for the Army and armaments. Expenditures from the state budget for the military industrial complex were considered expenditures from the national income that do not contribute to the economic growth and development of the country.

Economies of multinational socialistic state communities that disintegrated with the discontinuation of the „cold war“ and with the transition from the period of confrontation to a period of cooperation on the global international plane, were highly militarized, particularly in the case of the USSR and Czechoslovak Federal Republic, as members of the Warsaw Pact. These states disintegrated in peace conditions, without any aggression from outside or visible outside threat. They withered away from inside.

Causes of disintegration of the former USSR, former Yugoslavia and former Czechoslovakia were numerous, with the economic factor playing a great role, acting as a catalyst in intensification of destructive action of other factors – nationalism, political instability, and critical attitude of their people towards the ruling social-economic system and state organization.

Of a particular interest is the disintegration of the former USSR – one of the two global super-powers and the mainstay of the military-political alliance of former „real-socialistic“ countries of the Warsaw Pact. In nuclear and/or conventional armaments the former USSR was equal to the USA, and in some fields even a dominant power. Threat with the application of force in solution of conflicts between super-powers was terrifying. The economic power of the USSR, however, was doubly smaller in comparison with the USA, and its economy was inefficient and not competitive in the world market. In addition to exports of minerals and raw materials, exports of armaments were for the USSR a significant source of foreign currency income, which was further on used for keeping up the armament race. The decrease of prices of oil and the elimination of danger of confrontation between the Warsaw Pact and NATO, however, reduced the foreign currency income of the USSR from the armament sales, while the continuance of competition in the armament race exhausted its economy even further. The national economy of the former USSR found itself on the brink of collapse. In such situation were increasing and growing the disintegration trends and centrifugal forces of former Soviet federal and autonomous republics. The imposed „transition“, i. e. a radical transformation of the social-economic system of this socialistic state because of its transition from its authoritarian system to democracy, and from planned to the market economy, in conditions of economic instability and inefficiency, accelerated the disintegration of the country from within. Soviet citizens, however, whose standard of living was mostly on the verge of minimum, met the disintegration of the USSR without much interest, with apathy, and only now, five years after the commencement of the process of transition, begin to get aware of what happened to them and what is to happen further on.

All these confirm the prime significance of economy for national security of any country. Therefore the interdependence of economy and security of the country must be systematically monitored and incessantly studied, first of all from the standpoint of geopolitical and geoeconomical situation of the country, of its economic growth and social development.

M Sc Dušan Višnjčić, Colonel, M Sc Mitar Kovač, Major, M Sc Jan Marček, Lt. Colonel

There exist different approaches in the theory and practice of the art of war concerning identification of origins of the military doctrine and interpretation of their influence on the contents and procedures of working out of that doctrine. This report is an essay on this problem, its gravity point being placed on the scientific origins of the military doctrine.

Results of scientific researches in the world increasingly influence the identification of contents of the military doctrine, and methods of its formulation and application. Our theory on the military doctrine, however, since it is only barely and elementarily founded, does not offer sufficient solutions of this problem. In order that this relation could be comprehensively analysed it was necessary first of all to identify the idea of the military doctrine and its origins. The point of departure of the authors was that military sciences and military scientific disciplines, polemology in the first place, are the primary (direct) scientific origins of the military doctrine.

### Level of development of methodology of the art of war (polemology) and the establishment of methodological conditions for researching the relation between the military science and the military doctrine

D Sc Novak Milošević, Colonel, rtd, M Sc Petar Dražić, Colonel

A significant part of the problem of cognizance in all sciences, and thus also in military ones, is of methodological nature, because finding the right way in the process of cognition most usually means finding also the truth. The level of development of methodology of the art of war, and of its research process in particular, makes a precondition for ensuring consistency in the relation between the military science and the military doctrine. Application of the research procedure is a condition for overcoming the doctrinarism in military sciences, and for an objective and creative approach in building-up of the military doctrine. For the future development of the military scientific thought the most important step is therefore to get an insight into the level of development of methodology of the art of war, and then to appraise the current relation between the military science and the military doctrine.

Methodology of the art war was being developed rather intensively in the last quarter of this century. Basic methodological cognitions have been taken from the social sciences and adapted to researches conducted in the field of the art of war. Concurrently were being developed also specific methods, techniques, procedures and instruments, and the entire research process, so that it became, eventually, the authentic methodology of the art of war. Still, however, remain unsolved numerous logical, technical and specific scientific-strategic problems which should be systematically solved, first of all by researches and meta-researches.

It is indispensable that the modern military doctrine, as a system of established and accepted views and principles on organization, preparation and manner of utilization of the Army in the time of peace and in war,

should be based on scientific knowledge. Methodology of the manner of translation of scientific knowledge into doctrinal provisions has still not been, however, more clearly formalized. The military systems are, because of changes in factors of the armed struggle, prone to relatively quick changes. It is therefore unavoidable that the doctrinal provisions should be as completely as possible derived on the basis of researches, whereat the methodology of the art of war has a special place and function.

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## Theoretical-methodological foundations of development of combat service support-logistics, and their impact on military doctrine

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D Sc Vidoje Pantelić, Major General, D Sc Miladin Nikolić, Colonel

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In this report are identified and delimited: idea, contents, similarities and differences of ensuring the supply of matériel needed for the equipment and sustenance of the armed forces and for their preparation for carrying out of combat operations, by operating a system of combat service support, based on the concept of sector organization, also a system of logistic support based on an integrated functional concept. Explained are basic characteristics of the level reached in the development of combat service support in the Yugoslav Army, and of the logistic support in modern armies of the world. Directions for further development are pointed out, with the point of gravity placed on the logistic concept. Also guidelines are laid out for a possible theoretical-methodological foundation of development of logistics, with a particular emphasis placed on its application and on methodological procedures in the approach to the research of development of combat service or logistic support of the Army. Also the mutual influence of logistics and military doctrine has been reviewed.

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## Influence of research conducted in the field of nuclear weapons to the development of military doctrines

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D Sc Aleksandar Fotev, Lt. Colonel

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The author points out that the research and development conducted in the field of nuclear weapons influence the development of military doctrines both directly and indirectly. The direct influence is effected by means of development of different types of nuclear and electro-magnetic weapons, and of organization and means for the protection and defence from such weapons, while the indirect influence is brought about by the powerful incentive for the development of technologies that increase the productive power of states and significantly shorten the time between the invention of a means and its introduction into the military arsenal and doctrine.

Introduction of nuclear weapons into the war arsenal made also a political impact on the ideas on war. This has led to great changes in the organization of the armed forces and significantly influenced the change of

conditions for preparation and carrying out of combat operations and the armed struggle in general, imposing new solutions in war doctrines and strategies of countries that possess such weapons, for their most adequate use, as well as the finding out of manners for preparation and carrying out of the armed struggle and war in nuclear conditions on the part of countries which do not possess such weapons. From the development of nuclear weapons ensued also the development of electro-magnetic ones, introducing in the age of a full swing of information technology and of the emergence of the concept of an open information society even greater changes, and imposing the necessity of introduction of new solutions into military doctrines.