THE RELATIONSHIP BETWEEN
THE MILITARY OBJECTIVES AND THE URBAN SETTLEMENTS

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Abstract: *The tendency for military operations to develop within cities has grown, as a result of the pressure coming from urbanization and the consequences on environmental degradation. Within the urban area conditions, it is difficult to establish the difference between a civil belonging and the military objectives. In this respect, the concern for the smart cities, as innovative human establishments, became more and more interesting during the last years, passing from the academic concerns to the integration in the governments' planning or to the worldwide IT corporations' projects. Spatial planning of the aims meant for the Defense System is vital and to be in agreement with ecological, technological and social principles specific to the smart city. Understanding the impact of the presence of the military objectives upon the cities' development, along with providing the premises for optimizing the common using of the urban area, by all categories of users, military or civil ones, is going to be the foundation for a theoretical framework of analysis for the possibility of a further layout of the objectives designated to the defense within the smart cities.*

Keywords*: military objectives, smart city, spatial planning, urban security, localizing.*

Introduction

The historical evolution of the human presence in the territory has been manifested by generating a specific habitat and by creating human settlements related to the technological possibilities of every age. Talking about the development of the human settlements, there are several theories that try to explain how they emerged over time. Whether they refer to the geo-climatic conditions, to the defense needs, the religious and economic elements and the legislative decisions, the settlements were established based on the need of dwelling under various conditions. Increasingly present throughout time, the main form of living in the spatial organization frame has become the city. Along with the specialization of the dwelling environment the military, monastic or industrial cities have emerged. The desire of the leaders and planners to create *ideal cities* was manifested in the Renaissance by expressing perfect geometric shapes in diagrams of iconographic significance. The peculiarities of a certain function of the city have also led to spatial segregation, manifested through a visible territorial limit. Today, the physical limits of space have become diffuse, allowing the expansion of cities, in an environment that keeps on expanding. In this context, the presence of military objectives within the urban areas should be linked to the existing conditions in an environment of uncertainties, where contradictions, complexity and chaos dwell altogether.

1. Transforming military objectives[1] within urban settlements

The relationship between the military and urban settlements was marked

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[1] *"Military objectives are: a) armed forces except the medical service, the religious personnel and goods; b) establishments, buildings and positions where the armed forces and the military equipment are located (e.g. positions, barracks, warehouses) c) other goods: which by nature, location, purpose or use, make an effective contribution to military action, and whose partial or total destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage"*, Frédéric de Mulien, trad. Dumitru Codi , *Manual de drept al r zboiului pentru forţele armate,* Comitetul Interna ional al Crucii Ro ii, Geneva, Elve ia, 2013, Cap.C, Art.55

by each step in the history of human presence in the territory, by the sedentary lifestyle or by the movement of the population. People's commitment to certain environments is conditioned primarily by the demand of the need for subsistence, by the way to ensure the safety and stability of the settlements in time. The existing initial conditionings, as well as those related to the natural environment or the historical, political, economic, social and cultural conditioning etc. have led both to the spatial modeling of the territory as well as of the human behavior in relation to the new habitats created. Whether spontaneously made or based on predetermined plans, cities reflect a certain mindset coupled with the technological possibilities of achievement, specific to the existence period of the inhabitants.

A predominant way of delimitation of the urban settlements has been liaising with the defense works that were speculating the landforms in order to obtain the security of the urban settlement. In this respect, the most visible elements made for the defense of the cities gains a planned form during the Renaissance. In this period, there is a predominance of rectangular geometric shapes, physically evidenced by fortified defensive walls according to the requirements imposed by the progress of firearms. This is how they wanted to achieve perfection, a harmony that would comply with the ideal proportions in relation to the human scale. The concerns of the leadership of the cities were largely absorbed by the construction of fortifications, while ensuring the urban comfort was falling on the second place. The evolution the artillery has radically changed the defense system of the city, transforming the physical form in a stellar one, widely extended in the territory, a phenomenon that has significantly altered the spatial structure of the cities. The increase of the population density, alongside the movement of the physical limits of the fortification walls, the

emergence of new building techniques and the implementation simulation of the major industrial projects have changed the relationship between the military objectives and urban settlements. From presence concentrated on the physical limit of the cities we are switching to a cluster of defense nuclei in the territory. Based on the desire for knowledge and understanding of the surrounding reality, together with the achievement of the conditions for the composition and decomposition of the natural phenomena and/or artificial, we reached today to create specific technological tools, information systems acting as vital elements in making decisions in order to ensure the security of a territory. The relationship between subject and object has changed in terms of knowledge, but also due to the possible confusion of the two entities. Creating a virtual space as an extension of the real classical space brings the expression through a cluster of inter-dependencies. Therefore, the relationship between the military objectives and the urban settlements has changed both in terms of presence and location in the territory and also in terms of spatial resource use and mutual influences of the civilian and military activities.

The transition from a linear approach of the relation between the military objectives and the city, to an approach where contradictions, complexity and chaos prevail have generated novelties in the planning method of the defense in the urban settlements. Linking the city defense and development principles with the idea of the *intelligent growth*, today, is a goal difficult to achieve. However, principles such as accessibility, initiative, flexibility/adaptability and concentration/ density remain constant and available to use, in order to enhance the survivability capacity of the cities, given the current challenges.

Starting from the ideal of the *fortified city* from the Renaissance and having the security element as a

connecting idea, the concept that is emphasized today is the *intelligent city*. The word *city* is always the same, but the reality is in a continuous process of change. "*Given that there are many types of intelligence, we believe that in order to make sense, the concept of intelligent city must be based on the capability of detection, understanding and settlement of problems for the three levels of organization: material, the living structures (non-verbalized) and the social and human one (verbalized). Thus, the reliance on the real physical space - virtual space creates the ability to sense the connection between the elements of certain situations (inter-legere) and to find and communicate the solution related to such relations, through IT technologies.*"[2]

Beyond economic considerations, the power of the concept of the *intelligent city* comes from the desire of the political leaders to harmonize the relationship between the current issues of the contemporary world: the living environment, technology and society. This way, it is desired for the *intelligent city* to be an entity capable of developing in a sustainable way and to find solutions to complex issues the human settlements are facing. However, the lack of clarity and of a position unanimously accepted towards this concept has fuelled much of the political discourse at international level. For example, the *European Economic and Social Committee* proposes that the urban settlements should represent the driving force of a new European policy development, while for the implementation of an *intelligent city* concept there have been accelerated the works for the development

of tools necessary for the implementation of the projects.

Nowadays, the quantitative and qualitative problems of the cities are multiplied in terms of enhancing human mobility in the territory. Beyond the physical structural transformation due to the need to ensure the necessary elements for the cohabitation in environments which are increasingly dense, we are witnessing a transformation in terms of challenges regarding the minority-nation interaction. The "*Invasion*" of the refugees from Syria is challenging the EU countries in a way that it calls into question the whole European institutional construction. The dynamics of the influx of migrants adds pressure to the shared common spaces of the European cities, this way fuelling the tension between the states. The sedentary statute and stability of the settlements in Europe are threatened in such circumstances by the movement of those coming from the areas of conflict, the refugees, immigrants, migrants, asylum seekers or other categories of migration.[3]

2. Relation from an ecological perspective

The recent European and Euro-Atlantic concerns in the field of the environment security and military security, address, in particular, the climate change issues and their effects on the population movement worldwide.

Founded in 1969 under the NATO, the *Committee for Challenges of the Modern Society* seeks to respond to the

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[2] Rusu, Sorina-Georgiana, *New Military Spatial Planning Trends under the Influence of Revolution in Military Affairs and Globalisation,* in Proceedings: The 11th International Scientific Conference "Strategies XXI", "Strategic Changes in Security and International Relations", vol.1, "Carol I" National Defence University Publishing House, Bucharest, 2015, pp. 4,5

[3] "*Increased mobility has contributed to a higher number of migrants in recent decades (inter-regional migration, intra-EU migration and migration from non-member countries into the EU). Some migrants move in order to improve their living standards (for example, for improved employment opportunities), while others may be driven from their homes, for example to escape conflict and/or oppression.*", http://ec.europa.eu/eurostat/statistics-explained/ index.php/ Population_statistics_at_regional_level#Population _density, accessed on 09.09.2015

challenges of the environment and those related to the quality of life. Therefore, addressing the relationships between organisms and the environment in which they live, under the influence of the existing conditions and the military activities carried out in certain areas, it seeks a better understanding of the processes and existing resources, with the purpose of effective planning and management aimed at protecting the environment and improving performance. In this regard, there projects have been carried out that have targeted the cessation or reduction of pollution, urban problems, energy and health and, in particular, environmental issues with defense implications.

Also regarding the concerns about the environmental issues, the first policy of the *European Community* dealing with this subject was launched in 1972 and, starting this year, the topics covered are focused on the problems of acid rain, ozone depletion, air quality, noise pollution, waste, and water pollution.

In this context, the relationship between organisms and the environment in which they live is influenced by the existing living conditions. From this perspective, the relation between the military objectives- urban environment requires a smart environment management, given the natural and anthropic risks that go beyond state borders, and which can generate global issues. In this regard, the location of the armed forces, of the establishments and of the military goods in the urban areas, must be settled according to the principles of sustainable environmental development. "*Therefore, creating a coherent framework for integrating multiple components, both military and civilian, throughout the urban landscape, based on the effectiveness of the site, environmental conservation, the development of connected neighborhoods and the sustainable use of resources, will enable the transition from solutions planning to the real transformation of the*

defense structures in relation to the development of the cities."[4]

3. Relation from a technological perspective

The city leaders for a long time have benefited from various systems that enabled them to receive information and monitor the events, in order to make decisions about the existing threats and risks. In this regard, supervision[5] played an important role for the spatial knowledge in order to exercise power. With the modifications brought by the revolutions in the military field[6] and by globalization, we are witnessing significant changes in the relations systems, in the streams,

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[4] Rusu, Sorina-Georgiana, Tez de doctorat: *Transformarea peisajului structurilor de ap rare în context urban,* coala Doctoral Spa iu, Imagine, Text, Teritoriu, Universitatea de Arhitectur i Urbanism "Ion Mincu", Bucure ti, 2014, p. 80

[5] *"The exercise of discipline entails a device to coerce by the simple game of sight; an apparatus, in which the techniques that make it possible induce effects of power and on the other hand the coercive means make them perfectly visible on those to which they apply. During the classical era we are witnessing the slow building of these „observatories" of the human multiplicity to which the history of science gave too little attention. Along with the great technology of telescopes, lenses and light beams, which coincided with the founding of the new physics and the new cosmology, there were also small techniques of multiple and cross surveillance forms, of the methods to see without being seen; an obscure art of light and visible things prepared in an undertone a new human knowledge, through some subjugation techniques and their methods of use. These „observatories" have an almost ideal model: the military camp.",* Michel Foucault, *A supraveghea i a pedepsi*, trans. Bogdan Ghiu, Ed. Paralela 45, Pite ti, 2005, p.220.

[6] According to Andrew Marshall, *"A Revolution in Military Affairs (RMA) is a major change in the nature of warfare brought about by the innovative application of new technologies which, combined with dramatic changes in military doctrine and operational and organisational concepts, fundamentally alters the character and conduct of military operations.",* available at: http://www.nato-pa.int/archivedpub/comrep/1998/ar299stc-e.asp, consulted at 04.09.2015

connections, interdependencies between communities and between the individual and the community by increasing their capacity of interaction.

The access to an increasingly efficient technology in the sense of allowing human interaction as well as raising the awareness of reality, allowed the reorganization of armies and the commencement of a process of inter-connecting the command and control systems worldwide. Although it is well known that it is recommendable to avoid conducting armed conflicts in the cities, we believe that in the future, this recommendation will be difficult to meet.

From a military perspective, *"information systems consist of infrastructure, organizational structures, the staff and components that collect, process, store, transmit, display, distribute and act according to the information obtained. They form the structure that supports the processes of the general staff, the decision making staff, it provides a common relevant picture that contributes to sync the use of force, the connection of the sensors and the combat means of the commanders, it supports and protects the capacity of attack and protects the command and control."*[7]

The process of conversion of the military goods in military objectives or the opposite involves a temporary or permanent militarization of resources with the aim of carrying out the specific activities of training and modification of the space according to the complex requirements of the contemporary security environment. Alongside the existing information systems, in the future, the intelligent materials and the nanotechnologies will change the cities' defense methods, the location of the military objectives, their relationship with the neighborhoods and the ways to camouflage the military presence in the territory.

We believe that future challenges will be related to finding the legal solutions for placing the military objectives in the urban context, related to the possibilities offered by the *intelligent buildings* but complying with the international humanitarian rights under the pressure of urbanization and climate change.

4. Relation from a social perspective

The different needs that the location of the military objectives within the urban settlements involve have determined the adaptation of the space to functional, utilitarian requirements and less to the aesthetic and psychosocial ones. "*When the population lives below or just slightly above the subsistence level, its value system is comparatively uniform.*"[8]

The correlation and interdependence of natural risks – anthropic risks to which we are exposed nowadays – through the issue of resource decrease on one hand and the increasing need of pecuniary emulation on the other hand, indicates the need to strengthen the environmental security - military security relationship in the urban context. Anticipating a need before it actually occurs involves understanding the psychological mechanisms that underlie the human interactions and the security in the urban context, by creating spaces with the possibility to be used both for civil purposes and for military purposes. Thorough advanced estimating of the need and demand in the city we can achieve the integration of the civil and military needs in the urban settings.

Locating the military objectives within the urban settings can positively complement the architectural urban ensemble, without the negative influence

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[7] Cf. Col. (r.) Gheorghe Boaru, PhD – during the course of *Information Systems*, optional EDSM, 1st year, 2014-2015, Doctoral School, "Carol I" National Defense University, Bucharest

[8] Toffler, Alvin, *Corpora ia adaptabil*, trad. Robert Adam, Editura Antet, Bucure ti, 2001, p. 61

on the development of life in the city. Carrying out common technical-urban works, along with the common use of digital infrastructure of the cities and the creation of a legal framework of continuous civil-military cooperation, in the administration of the cities, can provide the development of the defense activities in terms of security challenges.

Therefore, in order to ensure the best conditions of coexistence between urban settings and military objectives, we must take into account the principles of location and relationship of these in the territory, which refer to:

_ The possibility of future development of both military objectives and localities;

_ The location of the military objectives in relation with the locality to be resolved so as to shield the locality from possible harmful activities;

_ To avoid locating military objectives on top of natural deposits, or elements that need preservation.

Referring to the residential and social mobility, we can conclude that *"[...] the space is thus understood as a place of competition between different social groups who are trying to dominate or maintain themselves in a certain position. These operations which lead to a convergence of numerous individual initiatives involve a relative fluidity of the land and property mechanisms and their logic leads to the replacement, more or less complete, of a population with another, inducing chain effects that will affect the whole urban territory."*[9]

Conclusions and proposals

Based on the analysis of the relations in terms of components: ecological, technological and social, we believe that in the future the relation of the military objectives to the urban settings will undergo significant changes, both in terms of physical structure and in terms of methods of spatial use of the existing resources. *"No matter the adversary, historical period and level of military strategy development, or the weapon systems or bullets, missiles or other means for striking targets, the future military confrontations will have a common point: the target, which is man's mind. Man is the one that initiates conflicts, fights against them, negotiates peace or sets relations among international actors. Future wars will focus on man's mind rather than on destroying him physically because somebody has to work to produce goods and services."*[10]

In order to meet the current and future security challenges, cities must implement the intelligent components at the physical, spatial and functional structure level, in all three levels of the reality organization (material, of living structures (non-verbalized) and social-human (verbalized)). Such a goal is difficult to achieve, given the lack of an integrating, monitoring and management platform for the existing elements. Even with the advanced technological tools available and various databases, the natural systems' instability makes it almost impossible to solve the complex problems we face now or that we will face in the future. However, we can hope that the knowledge method and the relationship with the environment has transformed from the perspective of the awareness of the security issues and military security, and from the perspective of understanding the shaping social processes that underlie our future decisions.

[9] Suditu, Bogdan, *Mobilit i i strategii reziden iale urbane i periurbane*, Editura Universit ii din Bucure ti, 2011, p.76.

[10] Orzeaţă, Mihail, *The War Humanity has Always Waged against Itself*, Armed Forces Academy of General Milan Ratislav Štefánik Publishing House, Liptovský Mikuláš, Slovak Republic, 2012, p. 227

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