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CONNECTIONS OF AIR POWER

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Abstract: *The concept of power, in general, and of air power, in particular, may be dealt with from various perspectives. Accordingly, there is no definition of the Air Power in a universally accepted vision, nor does it hold a clear-cut characterization. The rationale consists of the fact that Air Power unites/includes a multitude of complex processes with a variable dynamics, reaching diverse areas of society. Most of the authorized authors make reference to the military aspects of the Air Power only. Nevertheless, a more comprehensive approach, in accordance with changes that occur in society, is demanded.*

Keywords: *power, air space, air power, air force*

1. INTRODUCTION

The leitmotif of the beginning of the 21st century consists of an alert pace of the multiple changes taking place at a global, regional and local scale. The humankind, in its entirety, finds itself in a perpetual becoming and we all witness an acceleration of the fundamental processes of the social whole.

The combination of continuity and change reflects the complexity of the human society. The reasons for such transformations are of various nature and they to be found in any of the components of the contemporary world.

Humanity today faces serious problems related to economic, political, geo-strategic etc. issues, all of which are in a tight relation of interdependence. The acute dynamics of the specific phenomena is dispersed toward other areas – financial, demographic, military – reciprocally influencing one another. Consequently, we are yet far from speaking of

stability at the world level... Rather, we witness multiple turbulences, fact which proves that the process of change is excruciating, and that we are confronted with a permanent struggle between conservatory mentalities and globalization and integrating tendencies.

In a dynamic and unforeseeable world it is hard to establish for sure which is the probability of involvement in a conflict, and, moreover, its moment and intensity, both for the present and for the future. Being subjected to a constant pressure of the media and the information technology, with all sorts of contradictory and often false pieces of news, we are at a loss in decrypting reality once the perception of it is subjective.

By the current paper, I intend to present several aspects with regard to Air Power – its role, place, relevance – in the actual context.

2. GENERAL CONSIDERATIONS CONCERNING POWER

Geo-political and geo-strategic analyses highlight the fact that the transition process from past to future, via present time, is a continuous one. There are major mutations at various levels (economic, political, military etc.), the world physiognomy is re-shaped, hierarchies are re-established, and the power poles are being redefined.

In the broadest sense, power is the capacity to produce a certain outcome and, if we refer to human action (the conscious one) the outcome is anticipated, thus becoming a goal. Therefore, power is the capacity/ability to set a goal, to pursue and obtain specific outcomes in specific conditions, with specific resources, making use of specific tools, in a specific period of time. It presupposes the correct assessment of the momentary state of facts and the decryption of the tendencies of evolution to set the directions for action as well as the assessment, creation and development of the necessary resources for action. It is very difficult to define the concept of power, as it is a too vast topic. Nevertheless, I would like to add that power, with the meaning of the ability to do something, the capacity to act physically and morally, must be manifest: on the one hand, to be proved and on the other hand to be perceived as such. Power does not mean a state at a given moment (or not only this), but it is also action, the transformation of state towards a determined, desired direction.

There are numerous specialized institutions that monitor the states' evolution by certain standards, and, ultimately, they establish classifications or ranges. Specialized publications or the ones of general interest and information show diverse statistics, in one filed or another, based on which classifications of countries, institutions, scrutinized actors are established: "China has become the greatest economy of the world...", we learn from some journals; "preoccupied by the growth of China's military power, Japan has decided to increase its military expenditure", the Stockholm International Peace Research Institute's (SIPRI) report of 2014 informs us

[11]. The examples provided used as criteria of evaluation for the macroeconomic indicator (GDP – Growth Domestic Product), in case of the economic power, and the expenditure for the military (all government expenditure with regard to troops and current military actions, including expenditure for the personnel, research and development, administration). Thus, there is a comparative analysis, and, when the power of a state is invoked, there is focus on its ranking in relation with the other states, its potential status and its operationalization potential within a competition. The competition may be of a contest type (the characteristics of the economic background), or conflicting (specific to military action).

Certainly, it is desired, at least in declarations, that any competition should be maintained within the boundaries of a productive rivalry; yet, reality has proved that most often such oppositions turn into tough enmity leading to conflicts.

In reference to a state's power, there were numerous works written, but in essence, it is considered that a state is powerful if it holds the capacity to influence events, which implies different aspects – economic and scientific, demographic, military etc. In this respect, most of the analysts preserve a multidimensional approach to power, the power of a state being conferred by the efficient and balanced connection of its components; "there is no political power if it is not based on a robust economy, and every economy needs the intervention of the political factor in order for it to develop naturally" [6]. Power is the capacity of establishing objectives or making decisions, followed by the force of applying them. Implementation is the element that highlights real power [7]. Some authors are of the opinion that when analyzing the rapport between power and conflict one needs to start from the hypothesis according to which "A country's power materializes, first of all, in its military force and capacity of defending itself against one or more other states"[5].

In the context of this paper, approaching power as "a generalized social relationship that characterizes any human



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structure and community, irrespective of their dimensions and the historical intervals that humanity and society have gone through” [5], it is essential that we should clarify some aspects. First of all, since a “relationship” is mentioned, we need to identify (at least) two subjects of the relation: one to detain and apply power, and another one to have power applied on. Secondly, the materialization of power implies that it should be realizing by the parties of the relation. The degree to which power is highlighted represents, after all, the manner in which power is perceived by the entities involved and by the background where it occurs, and which it may, as well, influence.

As we have shown so far, power may emerge under various aspects. Thus, a state’s power displays several components or subsystems. Analysts and researchers have largely debated on defining and ranking forms of power, respectively, the components of power manifesting in society. In most of the cases, it is considered that power, in its entirety, is made up of a union of disjunctive components. In reality, those components are not strictly delimited; there are numerous common zones, areas of interference, which leads to a multitude of rankings of power. We observe that a state’s power presupposes the presence of the human factor and it is given by both natural settings – size, geographical position, climate, resources (material, energy, food)- and elements related to human activity – dimension and economic production, educational system, scientific research, governing, diplomacy, the army’s degree of preparedness and capability etc.

With regard to the geographical characteristics, the expansion of the human activity to the air space has determined the redefinition of the national territory, which now includes the air space [10], as well, and a

reconsideration of the state’s sovereignty over this newly included spatial element. In this context, taking the natural dominant setting of manifestation as a criterion of the analysis, we can identify, among the component elements of a state’s power, the air power next to land power and sea power.

2. AIRSPACE - ENVIRONMENT MANIFESTATION OF AIRPOWER

Indeed, it is very important to speak about airspace – the place where and in connection with which air power is manifest.

The term airspace generally represents the air blanket above the ground and water surface, without being very exactly delimited upright, because of the physical properties of the gas that it is made out of. I mention the fact that, at the beginning, in specialized literature, the thesis according to which airspace stretches up to the infinite was dominant. Subsequent to the development of aeronautics and aero-navigation, the issue of its juridical regulation is raised. Thus, today, it is identified: the airspace belonging to states, a component of the state territory and the air space with international regime, that is not subjected to any state sovereignty (for example that above the free sea). The Paris Convention, on October 13, 1919 consecrates and regulates the subjacent states sovereignty on the national airspace.[10] Although the airspace superior delimitation is no longer discussed about, it has been advanced the idea according to which this frontier should be established following certain criteria, more or less conventional. Some of them refer to the air physical properties – density, composition etc. –, while others refer to the aircrafts capacity to attain a certain height. We notice that it is very

difficult to exactly establish this border, as the mentioned criteria vary in time. Juridical literature offers an ambiguous, tautological answer: “the superior limit of airspace is where airspace begins”. Today, through bi- or multilateral conventions, although not unanimous, the superior limit of airspace is considered to be somewhere at 100 or 150 km above the earth surface.

The most important thing is for a country to be able to exercise its sovereignty in own space. Based on a state sovereignty over its own airspace, the state regulates the juridical regime of the respective space, carries out different activities within it, and may give foreign aircrafts the right of freedom of transit and traffic through its airspace, too. It may also limit the liberty to fly in its airspace or to ban certain foreign aircrafts from entering this space, may execute jurisdiction on foreign aircrafts when they are in its airspace, if there is no other special regulation and it has the right of indemnification for damages caused by foreign aircrafts.

Besides the regulations included in the airspace juridical status, states have ratified a series of documents regarding the international air navigation. We mention, in this context, the five “air liberties”, which refer to the right of flying over a particular territory, as well as to some liberties regarding landing and transportation by air.

The effects of air power surpass though the physical limits of airspace. Subsequently, the application of air power has effects not only in airspace but also in physical spaces – terrestrial and maritime – and in economic, diplomatic and informational “spaces”. In consequence, air power is, indeed, strictly connected to its environment – airspace, while its effects are manifest far beyond it and I consider, from this point of view, that an analysis of the air power effects is much more important than – strictly – the environment in which it manifests.

3. AIRSPACE - ENVIRONMENT MANIFESTATION OF AIRPOWER

The state power is given, among others, by: size, geographical location,

climate, resources (human, materiel, energy, cultural), the armed forces level of training and procurement, system of government etc. Perceived a part of a state’s power, air power holds a distinct role and it refers to the totality of the capabilities of both civil and military aviation. At the same time, here may be included the specific infrastructure, systems destined to air navigation protection and air space management, companies of aeronautical profile etc. [1]. We could say that air power refers to the capabilities that allow for the state to manifest its sovereignty in the national air space, all the factors that ensure the progress of the activities in the air, in appropriate conditions.

The air space and its premises (on the ground, at sea and in the outer space) destined to the aeronautical activity became an integrating part of the human activities at the same pace with the aviation’s development and it had a huge impact on society as a whole.

At the same time, the airspace has become the arena of some terrible and subtle confrontations during armed conflicts, to resolve military and other disputes (economical, political etc.).

With reference to the military component, some air power essential elements become evident: airspace and aircrafts, air capabilities and the specific characteristics of air actions. Air power is determined by many factors and I would like to mention the economic and political ones, which provide the resources and will. I leave a special place for aeronautical awareness, as it is a source of air power that can be found at the level of all its components, which it empowers. Science and research in the field, education in the field, specific infrastructure, air operators and the systems meant for the safety of air navigation are some other directions in which air power is manifest.

The affiliation to the international bodies meant to control aeronautical activities (ICAO, EUROCONTROL, NATINEADS) represents, another source of air power.

Starting from the fact that military aviation, air forces, in general, are more and more present in limited actions in different areas in the world. Therefore, some aspects



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that do not belong to the military sphere, but to the political one emerge, depending on the way and the moment air power is used to influence the opponent.

Air power, as well as the aircraft as such, is like a child of scientific progress: it cannot exist without advanced technology and borrows from it the fascination and mystery of a special, unknown and ... desired thing. As a result, both producers of specific technology and supporters of air power (defined as the "capacity to use air platforms for military purposes") want more and more funds that are everywhere and always bigger than the allotted budgets.

Air forces represent a way to interact with the opponent without having a physical contact with him, to strike him powerfully, rapidly and from distance, which determines us to give the notion "contact line" a second interpretation. The classical "front line" has disappeared, the enemy being now deeply struck, tens or hundreds kilometres far. Confrontations take place in airspace and in the electromagnetic environment, so that the entire area of military actions becomes an area of physical contact, aviation being the protagonist of this actional model (launching a destructive force against the opponent, without having a direct contact). "The air power objective in wide-spread conflicts, and not only, is to destroy the opponent will or/and his capability to resist" [1].

In modern warfare, what is more and more important is the way to act, the way to win the confrontation and their impact on the public, which tends to be primordial in the stage of conflict outcomes. This aspect, relatively new in the history of warfare, has become significantly important after the First World War, once the law of war was stated

and military actions extended spatially due to the fact their air component was confirmed.

Synthesising, we could say that the air forces is an instrument for the political factor of power, being placed at the confluence of the military power and the air power.

Air power is the manifestation of state power in the air environment and includes the mentioned factors of influence and, I feel bound to emphasise, the majority of them has a "non-military" nature.

Consequently, the air power and the military power have both common and specific elements, the problem of their interdependencies being the result of their study. To simplify, the connection between the military and the air power is represented by air forces and their action.

As it results from the things mentioned above, air power, in its military component, is the capacity of the owner to ensure the use of air space according to his will and to limit or ban the others from using it. The multitude of opportunities regarding its use allows for the military command to adapt the air actions (operations) dimensions and intensity to the concrete political and military requirements.

We have to notice once more the existent complex relationships and the created interdependencies between different aspects of power. Thus, a civil air fleet, even if it is not an element of military power, can contribute, through the force projection, to its enhancing potential in a theatre of actions. On the other hand, a military aircraft can be a vital element of the air navigation protection system, for civil aircrafts included.

Future world will be characterized by more and more subtle confrontations, at different levels, the military one included. Globalization has changed the nature of war, as well as the context in which the state

utilizes military force in its conduct in the geopolitical environment.

Without doubt, the “red thread” in the field of military actions is their joint character, which is known to be a complex phenomenon as far as theory, organization and action are concerned. The air component, more and more refined and sophisticated, is omnipresent in the armed conflict at the end of the century, becoming the defining element of modern warfare. Moreover, the accentuation and extension of confrontation in airspace is forecast, fact that is confirmed by states’ security policies programmatic/normative documents: air forces are included in modern armies quasi-totality.

Relatively new within the armed forces categories of forces, existing for less than a century, air forces have rapidly become important, due to their modernity and capacity to extend in space, which have led to a new way of conceiving military actions. Let us not forget that it is 109 years since Traian Vuia managed to “fly” a distance of (only) 12 meters, using a machine that was heavier than air, which could take off by its own on board-means. Although, in short time after the Air Force and began to be used for military purposes. If the First World War started being an air one, the Second World War was also an air war, the wars that followed them, no matter they had a local or limited character, highlighted the tendency of amplifying their air component, and the contemporary war cannot be conceived without it, at least in the predictable future. Aeronautic technology is developing very quickly. As a result of technological advancements in the field of aviation, in order to obtain similar effects, during the WW II, there were 9000 bombs used (1944) in 4500 sorties (B-17 aircraft), whereas during the Vietnam war there were only 190 bombs used in 95 sorties (different types of aircraft) and during the Gulf war only 2 bombs were launched from a B-117 plane.[r]

Air power evolution will be strictly connected to human evolution, in general, and, for a long period, it will be the front platoon of human knowledge development, being confronted with the general problems of

this globalization era. The important accomplishments in the field of air power will not belong to one single man or one single country, therefore scientific and technologic cooperation will be more and more evident and even compulsory, as one of globalization manifestations is borders “permeability” up to their becoming merely symbolic. Confrontation bellicose significance will be diminished and it will more and more become competition.

Subsequent to modern technologies development and our access to them (automation and miniaturization), the specific techniques and activities dual character (air and cosmic) will be emphasised and we could more and more speak about an aero-cosmic power. Air power (aero-cosmic) will be very attractive as far as the decision-makers are concerned, as they will develop and utilize it according to its specific properties: possibility of opportune, accurate, desired intensity action, exactly where it is necessary and with minimum effects on the environment.

It will also be preferred under military aspect, due to its coercive as well as its preventive role.

New ways of airspace “exploiting” will certainly appear and, of course, airspace will be more accessible to everybody, so more crowded, which requires appropriate regulations, air transport security being of great concern.

3. CONCLUSIONS

Although most of the specialized literature focuses on the military operational component of air power, we consider that, at a large scale, air power includes many other non-military areas, such as the aviation industry, air traffic operators, institutions for research and education, air space management systems etc.

Concerning the platforms used for the application of air power, we notice that, next to the fixed-wing or mobile-wing airships, in a larger vision, we should include the ballistic missiles, cruise missiles and satellites. The projection of an airspace platform is made in



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the light of its destination and future missions, another decisive factor for the development and modernization of the technological component of air power.

There is still need for an analysis and clarification of concepts regarding the air power, so that, subsequently, states may act with awareness for making the air power efficient. It is obvious that in the absence of a clear understanding of the principles of the air power, without a scientific approach to it, we may witness an erroneous management of both material and human resources. Therefore, a sequenced/limited and conjunctural approach will result in ineffective measures, or non-viable solutions. Whereas, the area of air power is similar with foreknowledge, long-term measures opposing the very alert pace of changes of the background. That is why, it is important to decrypt the defining elements and tendencies, to create the normative framework necessary for a rapid adjustment, to eliminate resistance to innovation.

The use of the air power in the military area is preferred by the political decision-making actors due to several of its essential features: freedom of movement both in horizontal and vertical plans permits the control of a vast space, in very short time; characteristics of the technology used permit a greater effectiveness of actions. Meanwhile, the manifestation of the air power in other areas contributes to the increase of the state's power tremendously.

This means, among others: sustainable/stable economic relationships under all circumstances; autonomy, as much as possible, from the viewpoint of resources; a net of alliances capable to facilitate the accomplishment and maintenance of security.

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