

Brazilian Special Operation Forces to the Benefit of the Basic Task of Air Control

Las fuerzas de operaciones especiales brasileñas en provecho de la Tarea Básica de Control del Aire

As forças de operações especiais brasileiras em proveito da Tarefa Básica de Controle do Ar

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ABSTRACT

Special Operations (Op Esp) are one of the most efficient kinds of military operation. They contradict conventional military employment because they use forces composed of small teams to reach goals against an opponent stationed on fortified bases. This research aims to analyze how the Brazilian Special Operations Forces (FOpEsp) contribute to the Basic Task of Air Control. The work is important, since the employment of these troops has increased considerably nowadays. In order to reach the goal of this study, the possibilities and limitations of the Op Esp for the completion of its tasks have been identified, and examples related to this subject were analyzed considering their impacts on some conflicts. As for the methodology, the data collection was based on bibliographical and documentary researches, and the data were treated analytically and provided the theoretical foundation for the definition of Op Esp and the conclusion of this work, which was based on the views of McRaven (1996). During the data analysis, it became clear that the suggested hypothesis had been corroborated, that is, that the Op Esp, with their unconventional methods based on a specific doctrine, when properly employed, may contribute in a decisive manner to the Control of the Air, acting directly upon the Suppression of Enemy Air Defenses (SDAI) and other targets of interest to the friendly Aerospace Power.

Keywords: Special operations. Special operation forces. Air control. Brazilian Air Force.

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RESUMEN

Las Operaciones Especiales (Op Esp) son una de las más eficientes maneras de operaciones militares. Hacen contradicción al empleo militar convencional, pues utilizan fuerzas de pequeño efecto, para que alcancen objetivos contra un oponente aparcado en bases fortificadas. Esta investigación tiene el objetivo de analizar como las Fuerza de Op Esp (FOpEsp) brasileñas contribuyen para la Tarea Básica de Control del Aire. El trabajo es importante, una vez que el empleo de esas tropas ha aumentado considerablemente hoy en día. Para atinjar el objetivo de este estudio, fueron identificadas las posibilidades y las limitaciones de las Op Esp para el cumplimiento de sus tareas y analizados ejemplos relacionados al tema, con sus impactos en algunos conflictos. En la metodología, la recolección de datos fue basada en investigaciones bibliográficas y documentales, cuyos datos, tratados analíticamente, fornecieron la base teórica para las definiciones de Op Esp y la conclusión del trabajo, hecha bajo la óptica de McRaven (1996). En el análisis de los datos, se hizo claro que la hipótesis sugerida fue corroborada, o sea, las Op Esp, con sus métodos no convencionales, basados en doctrina específica, si utilizadas adecuadamente, pueden contribuir de manera decisiva para el Control del Aire, actuando directamente en la Supresión de la Defensa Aérea Enemiga (SDAI) y otras metas de interés del Poder Aeroespacial amigo.

Palabras clave: Operaciones especiales. Fuerzas de operaciones especiales. Control del aire. Fuerza Aérea Brasileña.

RESUMO

As Operações Especiais (Op Esp) são uma das mais eficientes formas de operações militares. Contradizem o emprego militar convencional, pois utilizam forças de pequeno efetivo para alcançarem objetivos contra um oponente estacionado em bases fortificadas. Esta pesquisa tem por objetivo analisar como as Forças de Op Esp (FOpEsp) brasileiras contribuem para a Tarefa Básica de Controle do Ar. O trabalho é importante, uma vez que o emprego dessas tropas tem aumentado consideravelmente na atualidade. Para atinjar o objetivo deste estudo, foram identificadas as possibilidades e as limitações das Op Esp para o cumprimento de suas tarefas e analisados exemplos relacionados ao tema, com seus impactos em alguns conflitos. Na metodologia, a coleta de dados foi baseada em pesquisas bibliográfica e documental, cujos dados, tratados analiticamente, forneceram a base teórica para as definições de Op Esp e a conclusão do trabalho, realizada sob a ótica de McRaven (1996). Na análise dos dados, ficou claro que a hipótese sugerida foi corroborada, ou seja, as Op Esp, com seus métodos não convencionais, embasados em doutrina específica, se utilizadas adequadamente, podem contribuir de forma decisiva para o Controle do Ar, agindo diretamente na Supressão de Defesa Aérea Inimiga (SDAI) e demais alvos de interesse do Poder Aeroespacial amigo.

Palavras-chave: Operações especiais. Forças de operações especiais. Controle do ar. Força Aérea Brasileira.

1 INTRODUCTION

Special Operations (Op Esp) have increasingly gained importance in the world, and they are called upon at the most diverse conflict environments to act against governmental and non-governmental actors.

Currently considered one of the most effective forms of combat, the employment of specialized troops in unconventional combat provides an endless range of possibilities for the planners in the highest levels of the decision-making process. When properly employed, and when in synch with other resources, Special Operations Forces (FOpEsp) become a multiplier of the combat power, providing the commanders with the ability to boost their initiative, increase their flexibility, and broaden their vision of the battlefield.

This work has its essence in McRaven (1996), who, in the conclusion of his case study, states that a small FOpEsp team can overcome a defense that is more numerous and established on fortified bases, as long as it follows certain principles.

The restlessness that motivated this research arose when we envisioned the possibility of using

unorthodox vectors to fulfill the Basic Task of Air Control, which is classified as the highest priority in any scenario in which the Air Force is being employed, as established by the Basic Doctrine of the Brazilian Air Force (BRASIL, 2012a).

Once the Op Esp doctrine is observed, the FOpEsp can act on the Suppression of Enemy Air Defenses (SDAI), on Direct Actions (Aç Dir) against the enemy Aerospace Power, neutralizing or destroying targets that have Operational or Strategic value in hostile areas, or areas that are under enemy control. They also act on Special Reconnaissance (Rec Esp), aiming to obtain or to confirm specific knowledge about the targets of interest to the friendly Aerospace Power, and as Joint Terminal Attack Controllers (GAA), against targets located on the enemy's centers of gravity.

In this context, the present work has the goal of analyzing in which way the Brazilian FOpEsp contribute to the Basic Task of Air Control. The research is relevant, since it aims to deepen the knowledge about the degradation of enemy Aerospace Resources through the employment of small teams of troops, replacing, in a limited manner, the aerial vectors of the friendly

Aerospace Power that could be employed in other parts of the Theater of Operations (TO), with direct results in Air Control.

This study has offered answers to the initial question and to the goal of the research, corroborating the suggested hypothesis, that is, that the Op Esp, with their unconventional methods based on a specific doctrine, when properly employed, may contribute in a decisive manner to the Control of the Air, acting directly upon the SDAI and other targets of interest to the friendly Aerospace Power.

2 THEORETICAL FOUNDATIONS

In order to establish relationships among all of the study's variables, it is necessary to understand the origin of the concepts, studying the doctrine contemplated by the subject.

2.1 Doctrine

According to the basic doctrine of the Brazilian Air Force, called DCA 1-1, Control of the Air is the Basic Task of the Brazilian Air Force, that has the following purposes: to control the airspace and outer space of interest and prevent the enemy from doing the same, in a gradual manner and portraying the preponderance of one Air Force over the other in a certain scenario. Because of that, it is the highest priority in any scenario of employment of the Air Force and without it, freedom of action for the friendly military forces in the TO or in the Areas of Operations (A Op) cannot be guaranteed (BRASIL, 2012a).

In Brasil (2012a), it is also stated that three (3) levels are commonly used to characterize the degree of Control of the Air:

- a) Aerial Supremacy: the highest level which corresponds to total control of the airspace and outer space;
- b) Aerial Superiority: the level in which the friendly Air Force is capable of controlling only a specific portion of the airspace and outer space of interest for a limited period of time; and
- c) Favorable Aerial Situation: the level in which the enemy's aerial efforts are insufficient to affect the success of the friendly military operations.

Control of the air is obtained through actions that are offensive and defensive, lethal and non-lethal, directed towards Centers of Gravity (CG), both friendly and enemy, according to the goals established for the campaign or military operation (BRASIL, 2012a).

About the FOpEsp, the Manual of Special Operations (MCA 55-42) states that its components must belong to a highly specialized group of combatants, which leads to

the three (3) following considerations (BRASIL, 2009, emphasis added):

- a) they can perform high-risk tasks exceptionally well, and due to their special nature, **they must only be employed in the completion of special tasks;**
- b) they are often **outnumbered** when it comes to **troops and fire power**; therefore, they must take advantage of the application of **certain principles** that turn numerical inferiority into **relative superiority**; and
- c) the actions performed by those elements are **complex and demanding**, and require **special training**.

In Brasil (2009), it is stated that sometimes the need might arise to conduct actions against relevant objectives that are not in the immediate reach of the employed troops and/or that require special and unconventional techniques and equipment for their fulfillment. For their execution, such actions demand selected, specialized, well-trained and physically fit troops.

2.2 Theoretical Referential

The theoretical foundation of this study is McRaven's work (1996), who, through a case study, defined the **Special Operation Theory**, developing the concept of **Relative Superiority** and the **Six Principles of Special Operations**.

Born in 1955, William Harry McRaven is a US Navy Admiral who joined the military service in 1978. He was the commander of the Team Three of SEAL (acronym for Sea, Air and Land) during Operation Desert Storm.

Between 2006 and 2008, he was designated as the first director of the OTAN Special Operations Forces Coordination Centre (NSCC), in addition to serving as commander of the Special Operations Command Europe (SOCEUR), a position that he already held at the time. He served in Iraq and Afghanistan, respectively, in Operation Iraqi Freedom (OIF) and in Operation Enduring Freedom (OEF).

Between 2008 and 2011, he served as commander of the Joint Special Operation Command (JSOC), which is subordinated to the US Special Operations Command (USSOCOM).

He was the commander of the USSOCOM between 2011 and 2014.

Among other missions, McRaven is credited for organizing and overseeing the execution of Operation Neptune Spear, the Op Esp raid that led to the death of Osama Bin Laden, in Pakistan, by a SEAL detachment, on May 2, 2011, while he served as JSOC commander.

McRaven (1996) states that a successful Op Esp contradicts conventional knowledge, for it prescribes the employment of a small FOpEsp to defeat an

opponent that is numerically superior or is stationed on fortified bases.

The theoretical referential also defends that, taking advantage of certain war principles, along with moral factors, a FOpEsp may reduce the **frictions of war**, as defined by Clausewitz, to a manageable level. After minimizing these frictions, the FOpEsp may achieve Relative Superiority over the enemy. Once **Relative Superiority** is achieved, the attack force is no longer at a disadvantage, and has the initiative of exploring the enemy's weaknesses and ensuring victory (McRAVEN, 1996).

2.2.1 Relative Superiority according to McRaven

The FOpEsp must always strive for Relative Superiority in their actions by means of a simple plan, kept as a close secret, repeatedly and realistically rehearsed and executed with surprise, speed and purpose. This is the only way the FOpEsp can overcome enemies that are far superior in number and equipment (McRAVEN, 1996), according to Figure 1.

The concept of Relative Superiority is crucial to the Op Esp theory, and it is the condition that exists when an attacking force, usually smaller, gains a decisive advantage over an enemy with greater combat power, be

it because of the number and quality of their means of defense, or the level of fortification of their positions (McRAVEN, 1996).

2.2.2 Op Esp principles according to McRaven

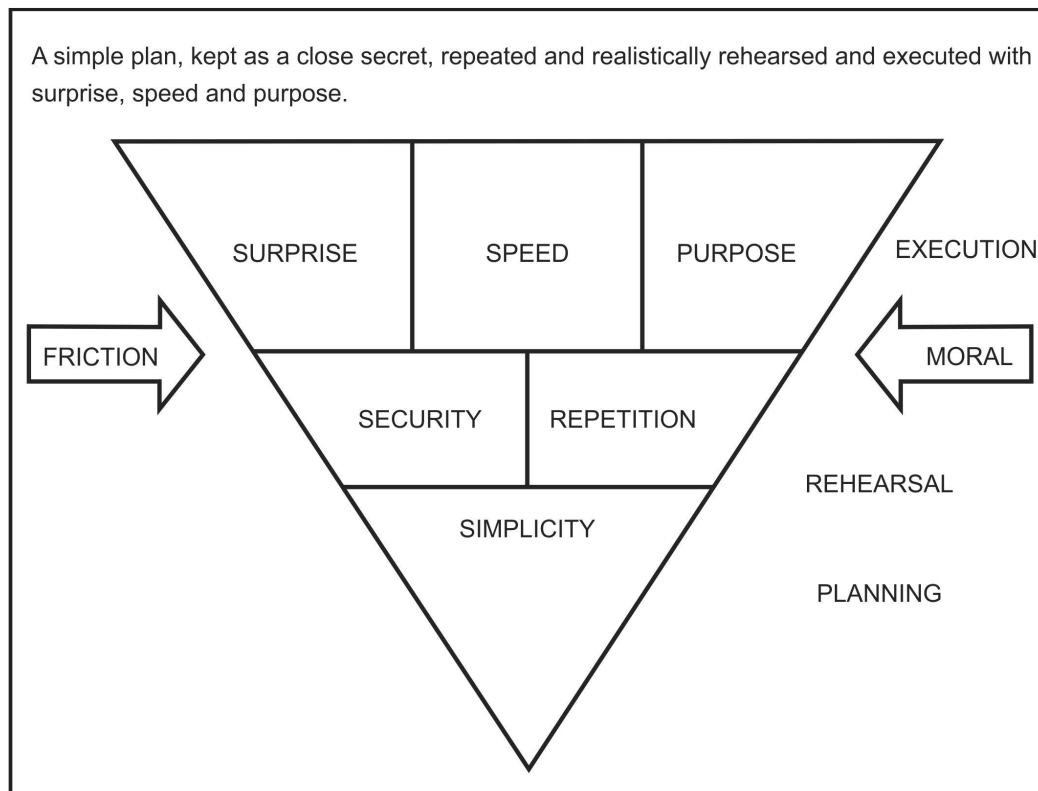
a) Simplicity

According to McRaven (1996), it is the most critical of the principles, and, sometimes, the most difficult to follow. In his conception, the simplicity of the plans depends on the application of three (3) factors that are crucial to their success: limiting the number of objectives, good intelligence, and creativity.

The limitation of the number of objectives concerns the tactical objectives, which must be restricted to those that are vital, in this way benefitting training, decreasing the necessary number of troops, and reducing the time of the action in the objective. The reduction on the number of troops involved, in turn, makes the Command and Control (C²) easier to achieve.

Good intelligence limits the unknown factors and the number of variables that must be considered, providing a proper evaluation of the opposing forces and a rigorous definition of the objectives.

Figure 1 - Special Operations Model.



Source: McRaven (1996, p. 11).

Creativity is manifested through innovations in equipment and the use of non-conventional tactics to overcome obstacles that might compromise surprise and speed.

b) Security

Security is achieved by preventing the enemy from obtaining any advantage by foreknowledge of an imminent action against their positions (secrecy).

Considering that the nature of the Op Esp is the action against a fortified position in which the enemy is expecting an attack, the secrecy – concerns the timing and methods of infiltration as opposed to the possibility of an attack.

The secrecy of the information must be given high priority, and it must not interfere with training and rehearsals (McRAVEN, 1996).

c) Repetition

The repeated performance of realistic rehearsals enhances the abilities of the attacking force. McRaven (1996) highlights that repetition perfects individual and group skills and reveals weaknesses in the planning, two aspects that are crucial in the battlefield.

d) Surprise

Surprise is achieved by catching the enemy off-guard through timing, deception, and taking advantage of their vulnerabilities.

The FOpEsp cannot be restricted to attacking the enemy while they are off-guard. They must attack despite the fact that enemy is prepared for it. Surprise, in this case, consists of exploring the moment in which the enemy is off-guard, and that is also most beneficial for the attacking force (McRAVEN, 1996).

e) Speed

In Op Esp, speed is accomplished by getting to the objective as fast as possible in order to limit your vulnerability and enhance the opportunity to achieve Relative Superiority.

With time, the effects of the surprise wear off, and the frictions of war start acting against the attacking forces. McRaven (1996) highlights that, in order to achieve surprise and increase speed, FOpEsp usually employ limited and lightly-armed troops, which do

not have the ability of sustaining an action against a conventional enemy for prolonged periods of time.

f) Purpose

The principle encompasses two (2) aspects. The first one involves understanding and identifying the prime objective of the mission; therefore, the orders must be clear, so that in the heat of the battle everyone is able to identify the purpose of the mission. In other words, the purpose of the mission must be explicit in its enunciation, such as: rescuing hostages; destroying the radar; lighting up the target etc. The second aspect involves personal commitment, and it means that each member of the attacking force must be motivated by a higher sense of dedication.

Paraphrasing Otto Skorzeny¹, McRaven states that:

When a man is moved by sheer enthusiasm and by the conviction that he is risking his life for a noble cause... he carries within himself the elements that are crucial for success. (McRAVEN, 2006, p. 23).

2.3 Other sources

The work of Man (2004) contributed to this study; he describes the life of Genghis Kahn and mentions unconventional actions performed by some of his army's combatants against their opponents, resulting in tactical and strategic advantages. Another contribution to this study came from the work of Vick (1995), who studies the greatest attacks on air bases between the years of 1940 and 1992. In an excerpt from his book he states that:

At least in one of the letters he sent home, Rommel expressed an admiration for Stirling², describing him as the "commander of the extremely qualified and adaptable desert team that had caused us more damage than any other British unit of equal force". Rommel failed, however, at taking any significant action to stop these attacks. (VICK, 1995, p. 64).

Another contribution came from the work of Brungess (1994), who explains the importance of the SDAI actions in the conduction of aerial warfare by referring to the synergetic employment of the many different available means to accomplish the expected effect, like the Aerospace Power and the Op Esp.

3 METHODOLOGY

A methodology based on bibliographical and documentary research techniques for the collection

¹ Otto Skorzeny, an Austrian lieutenant colonel in the German Waffen-SS during World War II, was a Commando leader that commanded the rescue mission that freed the deposed Italian dictator Benito Mussolini from captivity.

² Captain David Stirling, World War II British Army Commando officer, and the founder of the Special Air Service (SAS) units that fought in North Africa.

of data, that were treated analytically, was used in this study. The choice of these collection techniques is justified, because the data regard subjects connected to theoretical, historical and doctrinal concepts. This methodology has contributed to the organization of the work, making the judgements and reasoning necessary to its conclusion easier.

There were no limitations to the research, since the data were collected from military doctrinal manuals and public literary works. Through the bibliographical research, the foundations for a review of the literature were obtained, in which case studies and works of historical nature were consulted, and that made it possible for us to assess the theme's dimensions. McRaven (1996) was adopted as the theoretical referential of the bibliographical research. In his work, he defines the **Theory of Special Operations**, developing the concepts of **Relative Superiority** and the **Six Principles of Special Operations**.

In order to support the theoretical foundations of this work, other authors were consulted, such as Man (2004), Vick (1995) and Brungess (1994); from their works we could retrieve historical data that reinforced the theoretical referential.

In the documentary research, many different manuals and documents from the Defense Ministry (MD) and Armed Forces (FA) of Brazil and of other nations were examined, and that has allowed a comparison of the doctrinal concepts regarding the Op Esp. These sources have subsidized the broad understanding of the subject, the conceptualization of the Op Esp, their principles and features, as well as the possibilities and limitations of the FOpEsp for the performance of activities that contribute to Control of the Air, describing their main targets.

The knowledge generated is presented in the form of topics and tables in order to facilitate the comprehension of the data, the delimitation of the subject and the analysis of the results, which enabled us to reach a conclusion of this study.

4 PRESENTATION AND DATA ANALYSIS

The Op Esp represent one of the most versatile forms of combat in the modern world; however, their techniques date to millennia, when armies, according to Sun Tzu, started to become professional in 500 BC (MAN, 2004).

These primitive armies used to send spies to investigate enemy positions, their probable intentions and main weaknesses, thus anticipating maneuvers and decisions. They would also plan sabotages and spread

rumors to cause panic among the population and to install discord between the sovereign and his ministers, between bosses and employers, and between the elite and the mass of subjects, bringing subversion to the enemy territory (MAN, 2004). This form of combat is known today as Irregular Warfare, and it is part of the Op Esp spectrum.

Man (2004) states that some of those tactics were essential in order for Genghis Kahn and his descendants to conquer one fifth of the world's territories in the Eighth Century, extending their domains from Asia to Europe. However, it was only with the advent of two (2) world wars, especially the second one, that the FOpEsp began to be organized in the way they are known today.

From that time on, many theories on the subject have arisen, and they complement or alter the ideas of some of the old warfare theorists, who were considered universal up to that point, like Clausewitz as an example.

In order to maintain its ostensive character, the Brazilian Op Esp units that have been qualified to perform such activities have been intentionally omitted from this study.

4.1 Conceptual Data

The concept of Op Esp has been long discussed and interpreted. In the Brazilian Air Force (Portuguese acronym for FAB), according to the Guideline of the Basic Organizational Structure of the Air Force Infantry (DCA 19-2), the Op Esp are:

[...] the set of actions with unconventional features that differ from the troops' normal employment, and which are executed by personnel with a high level of training and operational readiness. (BRASIL, 2002, p. 14).

The document, however, does not define what those **actions with unconventional features** are, or the level of training necessary to perform them.

Another document from FAB, called DCA 1-1, even though the organization of the many activities performed by FAB is largely discussed, and described as Air Force Actions and Basic Tasks, the Op Esp are not defined, even though Air Force Resources composed of FOpEsp are necessary for the execution of some of their actions. In item 5.4, Air Force Actions, DCA 1-1 mentions four (4) actions that are **typically** executed by the FOpEsp, such as: **Direct Action (Aç Dir)**, **Counterterrorism (C Trr)**, **Joint Terminal Attack Control (GAA)** and **Special Reconnaissance (Rec Esp)**.

Besides, there are still Air Force Actions that may also be executed by FOpEsp, as a complement or a consequence of a previous action, such as:

a) **Combat Search and Rescue (CSAR)**, which, despite the fact that it is not a Op Esp, may be executed by FOpEsp of FAB, because they are qualified to do so during their specialized training;

b) **Operational Intelligence (Intg Op)**, in the search for denied data that may be used to produce knowledge about the opponent; those data are usually acquired through Rec Esp missions;

c) **Psychological Operations (Op Psc)**, because a Op Esp usually has a psychological effect over the enemy, and might have even been originally planned with this goal;

d) **Attack**, an Action that may be classified among FOpEsp actions against enemy targets that are not related to the Aerospace Power. These actions are known as Actions of Commando; and

e) **SDAI**, because, when a Aç Dir is executed over enemy's Aerospace Defense Resources or C², a SDAI operation is executed at the same time, because the targets are part of the enemy's Aerospace Power.

Since this work focuses on the study of the relationship between the Actions executed by the FOpEsp and the Basic Task of Air Control, only the operations that bear this relationship were considered, that is, Aç Dir, GAA and SDAI.

The Aç Dir and SDAI operations, executed by the FOpEsp, are very similar in doctrinal terms, but they are not completely coincidental. It is possible to say that, when a FOpEsp executes a SDAI, it is also executing a Aç Dir,

even though the opposite is not always true. This situation may be explained by the fact that all SDAI targets belong to the Aerospace Power of the enemy, even though not all Aç Dir targets belong to the Aerospace Defense system or C² of the enemy. An example of that would be a FOpEsp Action against aircraft on ground: if the aircraft is an enemy Air Defense jet, the Action could be classified as a SDAI as well as a Aç Dir; but if the aircraft is a transport aircraft, the action can only be classified as a Aç Dir.

For the present study, in the GAA Action, only the targets that are related to the enemy's ability to control the airspace and outer space were considered. As for the SDAI/Aç Dir, the FOpEsp aim to neutralize or destroy Aerospace Defense systems, C², and other enemy targets of strategic or operational value in hostile areas or areas under the enemy's control, producing effects over the enemy's Aerospace Power. As examples of these actions, we can mention surveillance radars, anti-aircraft missile launchers, aircraft on ground, aircraft that are about to land or just after take-off (with the use of shoulder-fired missiles) etc.

In the GAA action, the FOpEsp will coordinate, from the ground, the attacks of the aircraft against enemy targets. For the present study, targets related to the Aerospace Power of the enemy were considered, like missile sites or fighter planes on ground; if those targets are degraded, this will affect the enemy's ability to control the air.

In Chart 1, the main targets of FOpEsp of the Brazilian Army (EB) to be attacked through Aç Dir are presented:

Chart 1 - Targets for Aç Dir.

DIRECT ACTIONS		
Tactical Action	Critical Targets	
Destroy	Enemy aerospace defense system	- aircraft on ground; - surveillance radars; - anti-aircraft batteries (tube or missile); - takeoff and landing runways; and - others (aviation fuel deposits, gunpowder magazines, etc.).
	Critical Infrastructure	- port facilities; - railway and road systems (especially bridges); and - defense product industries, including their consumables (raw materials and energy).
Neutralize	Military facilities	- comand and control; and - logistics.
	Saturation fire	- multiple rocket launchers.
Eliminate Capture	Insurgents leaders and terrorists.	
Rescue	- Nationals or foreigners taken as hostages; - Prisoners of war; and - [Protect and evacuate] Nationals in areas of tension and crisis.	
Reclaim	- The country critical infrastructure facilities kept under the control of adverse forces with or without the presence of hostages.	
Conquer Occupy	- Strong points and security goals that allow for na attack led by conventional forces in built-up and densely populared areas.	

Source: Manual de Campanha C 31-1 - Operações Especiais (BRASIL, 2012b, p. 3-3).

In the Special Operations Campaign Manual (C 31-1), it is stated in item “c” that:

The direct actions gain importance due to the **limitations** of the Air Force, and may be conceived **to support or complement an aero-strategic campaign**, mainly in the **initial stages of the achievement of aerial superiority**. (BRASIL, 2012b, p. 3-1, emphasis added).

The same manual explains, in item “a”, that:

Direct actions may be conducted against targets of political, strategic or operational importance, or those considered crucial from a tactical point of view. (BRASIL, 2012b, p. 3-2).

In the item “d”, it explains that:

During the course joint operations, it is the Joint Command's duty to define the targets that will be attributed to the FOpEsp through the Integrated Prioritized Target List (LIPA). (BRASIL, 2012b, p. 3-2).

In Brasil (2012b), the Direct Actions are usually called Action of Commando.

For Brasil (2009), the Op Esp are classified into action of commando, **direct actions**, irregular warfare operations, operations against irregular forces, counterterrorism operations, special reconnaissance operations, psychological operations and intelligence operations.

In order to get a more clear view of the subject, some national and foreign definitions of Op Esp, emphasizing the common ideas, are presented in Chart 2.

Chart 2 - Comparison of Op Esp definitions.

	Definition of Op Esp
MD	1. Operations conducted by specialy organized, trained and equipped military forces aiming to achieve political, economic, psychosocial or military goals through the employment of conventional and unconventional military resources, in hostile areas or areas under enemy control, in situations of crisis, armed conflict or war . 2. They constitute an operational universe destined for the employment of the Air Force in environments with unconventional features, and for which concepts that differ from those employed in the other Air Force operations are demanded. (BRASIL, 2007b, p. 183, emphasis added).
FAB	Operations conducted by rigorously selected and specialy organized, trained and equipped military forces aiming to achieve political, economic, psychosocial or military goals through the employment of conventional and unconventional military resources, in hostile areas and/or areas under enemy control, in situations of crisis, armed conflict or war . (BRASIL, 2009, p. 13, emphasis added).
EB	Operations conducted by specialy organized, equipped and trained military and/or paramilitary forces aiming to achieve relevant military, political, economic or psychological goals, through unconventional military alternatives . They may be conducted: in times of peace or during times of crisis or armed conflict ; in situations of institutional normality or abnormality; in an ostensive, covert or secret manner; in areas that are denied, hostile or politically sensitive ; independently or coordinated with operations conducted by conventional forces; in favor of commands that are in strategic, operational or, sometimes, tactical levels. (BRASIL, 2012b, p. 2-1, emphasis added).
MB	They encompass Surveillance and Reconnaissance actions, as well as Action of Commando; the latter is defined as actions conducted with strategic or political purposes, towards deep objectives, in territory under enemy control with specialized and reduced troops . (BRASIL, 2007a, p. VI, emphasis added).
EUA	They differ from conventional operations in terms of the degree of physical and political risk, operational techniques, modes of employment, dependence on detailed intelligence and native operational resources. Op Esp are conducted in every kind of environment , but they are particularly suited for denied and politically sensitive environments . Op Esp may be adapted in order to reach not only military goals, through the application of the abilities of the Op Esp , for which there is not a great demand for conventional forces, but also to support the application of the diplomatic, informational and economic instruments of the national power . (USA, 2011, p. IX, emphasis added).
McRaven	A Op Esp is conducted by specialy trained, equipped and supported forces focusing on a specific target , whose destruction, elimination, or rescue (in the case of hostages), is a political or military imperative . (MCRAVEN, 1996, p. 2, emphasis added).

Source: The author.

Analyzing this table, the similarities among the definitions of Op Esp become evident, and that characterizes a worldwide trend. It is also notorious the predisposition of the FOpEsp for actions conducted in hostile environments, which are not recommended for conventional forces and, at times, also for aviation.

4.2 Possibilities of the FOpEsp

As an example of FOpEsp acting in favor of friendly Control of the Air against enemy Aerospace Power, we can mention Vick (1995), for he states that the British FOpEsp were the first land forces to systematically attack enemy planes on ground, in North Africa, during World War II.

According to Vick (1995), in 1941, the recently created Special Air Service (SAS), originated in the Command Units of the British Army, started acting in North Africa in units known as Long Range Desert Group (LRDG), destroying thousands of gallons of aviation fuel and many tons of aviation ammunition, as well as other materials of the Axis powers, not to mention the number of enemy lives taken from the enemy forces.

Such actions were maintained until 1943, when at least three hundred sixty seven (367) German aircraft on ground had already been neutralized in little more than two (2) years. The importance of those actions was so great that in the month of July 1942 alone, the SAS neutralized 8% of all the German aircraft stationed in North Africa (VICK, 1995).

In more current examples, Brungess (1994) defends that the synergy created in the Desert Storm Operation in 1991, through simultaneous electronic interferences, anti-radiation missile launches and the employment of Op Esp against specific targets has formed the core of the SDAI operations, and it literally paralyzed the Command, Control and Communications (C³) network and the Air Defense system of Iraq.

4.3 Limitations of the FOpEsp

Despite the fact that the use of the FOpEsp is becoming increasingly more common, planners must respect the typical limitations of these forces.

USA (1995) warns that, if the FOpEsp are required for an action, the Commander of the Joint Special Operations Command must be notified within enough time for the planning, preparation and infiltration to be executed. This is due to the fact that the FOpEsp are highly qualified, though vulnerable, and any aspects missed during the planning and preparation stages will

almost certainly lead to the destruction of the FOpEsp, resulting in an unfulfilled mission.

According to Brasil (2009), **Time**, as a generally scarce decision factor, reduces the possibilities of previous preparation for the action, thus requiring constant training. Besides that, incomplete information about the scene will contribute to the inefficacy of the actions that are to be carried out.

Brasil (2009) also explains that the Op Esp differ from conventional operations because of their high degree of risk, their techniques, tactics and specific operational procedures, the independence of the actions, and their great reliance on intelligence and on high-tech materials and equipment.

4.4 Analysis

According to the data presented, it is possible to establish a relationship between the research variables, that is, the Brazilian FOpEsp and the Basic Task of Air Control, and it is important to highlight that for this analysis, the actions developed by the FOpEsp in scenarios where the employment of aviation is contraindicated were taken into consideration, as, for example, high adverse collateral effect, great threat to the aerial vector (enemy aerial and anti-aerial defenses), shortage of friendly aerial resources, enemy surveillance radars and high degree of uncertainty about the target.

After consulting many different doctrinal manuals, we realized that the existing definitions of the Op Esp are similar, as well as the features, possibilities and limitations of the FOpEsp. It was clear in many examples of Op Esp actions, described in the researched literature, that the results accomplished by these small fractions of the troops surpass in effect what one might expect of conventional troops of the same size.

Besides that, among the accomplished goals, many of them also resulted in psychological effects over the enemy, influencing their will to fight. The specific actions against the Aerospace Power, in turn, heavily degraded the enemy's ability of Aerospace Defense and, at the same time, benefited the friendly Air Force in the establishment of the Control of the Air. This is portrayed in World War II, in which hundreds of German aircraft stationed in North Africa were rendered useless still on ground by the British FOpEsp. These forces neutralized 8% of all enemy aircraft in just one month.

During the Gulf War, in 1991, the coalition FOpEsp were infiltrated with the expected antecedence and executed all kinds of missions, many of them to the

benefit of the Aerospace Power, like Rec Esp, GAA and Aç Dir. More recently, during Operation Iraqi Freedom and Operation Enduring Freedom, the role of this kind of troop to the benefit of the friendly Aerospace Power was important.

In the different definitions of Op Esp, we can see that the troops that perform this kind of activity have great specificity, and there is no room for improvisations or amateurisms. It was also clear that, despite being highly qualified, the FOpEsp are very vulnerable, not having the necessary fire power to confront conventional troops for long periods of time because of their small numbers. For this reason, they must always apply the **Six Principles of Special Operations** in all stages of the operation, that is, planning, preparation and execution, in order to obtain **Relative Superiority** over the enemy and for the operation to have the possibility of success.

Brasil (2009) states that the Op Esp differ from the conventional operations because of their high degree of risk, their techniques, tactics, specific operational procedures, the high degree of independence of the actions, their great reliance on Intelligence, at every level, and their dependence on high-tech materials and equipment. This assertion puts to rest the understanding about the specialization of the FOpEsp, but it also exposes their limitations. These limitations are implied in USA (1995), when it exposes the complexity behind a Op Esp and that, for this reason, the Commander should be afforded enough time for the planning, preparation and infiltration of the FOpEsp.

Despite being fully capable of executing Actions that directly contribute to the Basic Task of Air Control, we must consider that the FOpEsp are limited in their ability of aircraft replacement and, therefore, one must be sensible when delimitating their goals.

Since the FOpEsp can execute a wide array of missions for which the use of aerial vectors is contraindicated and vice versa, the synergetic and complementary employment of these resources may generate positive results for the military campaign.

After analyzing the collected data and studying the documents that compose the doctrine related to the subject, we understand that the suggested hypothesis has been corroborated, that is, that the Op Esp, with their unconventional methods, based on a specific doctrine, if properly employed, may contribute decisively for the Control of the Air, acting directly over the SDAI and other targets of interest to the friendly Aerospace Power.

5 CONCLUSION

FAB, through doctrine DCA 1-1, classifies its main activities as Air Force Actions, which, if executed at the Tactical level, aim to contribute to the purposes of superior levels, defined in the Basic Tasks of the Air Force.

Among all Basic Tasks, the Control of the Air is considered to have the highest priority in any scenario of employment of the Air Force, because only after reaching this condition, the freedom of action for the friendly military forces is guaranteed in the TO or A Op.

This research was motivated when we envisioned the possibility of utilizing unorthodox vectors in the quest for Air Control, specifically through FOpEsp. This restlessness is reasonable, since it is known that, when properly employed and in synch with other resources, the FOpEsp become a multiplier of combat power. Besides that, scenarios increasingly more complex, in which the employment of aviation is contraindicated or the aviation resources are scarce, would lead the planners to search for other options.

In this context, the present work was intended to analyze the ways in which the Brazilian FOpEsp contribute to the Basic Task of Air Control. In order to do so, this research selected data regarding the existing definitions of Op Esp and their principles, as well as the possibilities and limitations of the FOpEsp in their employment in benefit of the Basic Task of Air Control. In the data collection, we could visualize the FOpEsp Actions against enemy Aerospace Power, degrading its ability to act for the Control of the Air. Since the data were obtained from public literary works, there were no limitations to the research.

This study is mostly based on McRaven's works (1996), who states that a force composed of a small number of troops can overcome a defense that is more numerous and established on fortified bases, if certain principles are followed.

The research is relevant, since it tried to deepen the knowledge about the degradation of the enemy Aerospace Power through the employment of small fractions of troops, replacing, on a limited manner, the aerial vector of the friendly Aerospace Power, which could be employed in other parts of the TO, directly contributing for the Control of the Air.

The study allowed both the initial questioning and the answers to it, and the accomplishment of the research goal, corroborating the suggested hypothesis, that is, that the Op Esp, with their

unconventional methods, based on a specific doctrine, if properly employed, may contribute decisively for the Control of the Air, acting directly over the SDAI and other targets of interest to the friendly Aerospace Power.

Despite the training of the FOpEsp to the benefit of the Control of the Air, we must consider that they are limited in terms of the substitution of the aerial

vectors, and, therefore, one should be sensible when delimitating their goals.

Therefore, the final statement is the following: if the FOpEsp can execute a vast range of missions for which the use of aerial vectors is contraindicated and vice versa, we understand that the synergetic and complementary employment of these resources may generate positive results for the military campaign.

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