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The path of CMM: from an institutional publication to a scientific journal

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*There must be more – and more adequate – military
research during peace time. (BUSH, 1945)*

When the Philosophical Transactions of the Royal Society was published in 1665 with the aim of creating a means of publicly recording scientific discoveries, protecting the intellectual property of scientists, and sharing their findings with their peers (GUÉDON, 2001), it is certain that the first scientific periodical was not concerned with the impact factor of its publication or even its future indexing in the main databases. However, this very publication currently has eleven journals in different areas, many of which are indexed in the main databases of the world.

Although the main aim of a scientific journal has remained virtually unchanged for the past three and a half centuries, the changes brought about by revolutions such as the “nineteenth-century academicization” and the “industrialization of science in the twentieth century” have resulted in an increase in the volume of journals published, impacting the publishing process and reducing the quality of its content (ZIMAN, 1981, p. 121). The exponential growth of periodic scientific production predicted by Derek de Solla Price (1963) found its support in the new technologies of information that slowly replaced printed periodicals. Such new information technologies developed in the 1970s and 1980s caused structural changes in the scientific journal, inducing dynamism and flexibility to communication among scientists (TARGINO, 1999). The use of electronic platforms has consolidated in the twenty-first century; all major journals in the world use websites hosted on the worldwide computer network as their main communication vector.

Electronic journals are part of an Internet-mediated science, which has made the processes of scientific activity more effective, helping to create spaces for communication, production and dissemination

of information, especially through free and open access (WEITZEL, 2006). These spaces favor interdisciplinary and interinstitutional exchanges, allowing a broad dialogue between academics and professionals.

As an academic field in Brazil, Defense is still new in CAPES, with the main debates on actions towards its formal recognition occurring at the end of the twentieth century and beginning of the twenty-first century (PINHEIRO; MIGON, 2019). In parallel, we observe the publication of the first Política de Defesa Nacional (Brazilian National Defense Policy) (BRAZIL, 1996) and the creation of the Ministry of Defense (1999). As the National Defense Policy was transformed into Política Nacional de Defesa (National Policy of Defense), the Estratégia Nacional de Defesa (National Defense Strategy) and the Livro Branco (White Paper), which is updated every four years. In 2005, the Associação Brasileira de Estudos de Defesa (Brazilian Association for Defense Studies – ABED) emerged in the academy, indicating the broadening of studies surrounding areas directly and indirectly related to the military sciences, national defense, security, war, armed forces and other related topics. Security and defense studies have been increasingly debated in society and by the Brazilian academy.

The Brazilian Army did not remain inert to the process of greater rapprochement and dialogue with society, so after a maturation period, the Instituto Meira Mattos (Meira Mattos Institute – IMM) was created in 2011 at ECEME (NUNES, 2012). Place where the Programa de Pós-Graduação em Ciências Militares (Graduate Program in Military Sciences – PPGCM) was created, with Master's and Ph.D courses, both recognized by CAPES, and composed of civilian and military students and professors who work in an integrated way.

It is in this context that the Coleção Meira Mattos (Meira Mattos Collection – CMM) is developed, seeking to corroborate with the field of study and scientific activity. In addition, the collection seeks the recognition of the scientific community combined with the improvement of the quality of publications. Thus, to understand the role of this publication, it is fundamental to return to its origins.

History

The origin of CMM has a historical link with the professional and intellectual updating of General Staff officers. Since the main function of a scientific journal is to communicate the latest research results in a particular area to its peers, the first publications that preceded CMM also divulged the most recent subjects on the Military Sciences and their studies, especially those dedicated to doctrine.

On November 9, 1965 the Curso de Atualização dos Diplomados in the Curso de Comando e Estado-Maior and Curso de Chefia de Serviço of ECEME (Course for Updating Graduates in the Command and General Staff Course and Service Direction Course – CAECEME) was created. This was a distance education course that provided, via correspondence, five Notebooks on the following subjects: internal security, operations in continental territory, operations in extracontinental territory, professional culture and miscellaneous subjects.

The course lasted 36 weeks and was renamed the Curso de Atualização dos Diplomados pela Escola de Comando e Estado-Maior do Exército (Course for Updating Graduates by Escola de Comando e Estado-Maior do Exército – CADECEME) in 1974. The course did not undergo any significant changes in its course format and continued to be distributed in notebooks with articles for knowledge updates.

The CADECEME was changed on August 23, 1991, now renamed as the Processo de Atualização dos Diplomados pela Escola de Comando e Estado-Maior do Exército (Updating

Process for Escola de Comando e Estado-Maior do Exército Graduates – PADECEME). The distance education format was changed to annual update cycles. And its participants – General Staff Officers – are updated via information notebooks distributed during the year.

The PADECEME notebooks comprised works elaborated by alumni of ECEME and syntheses of ongoing studies. According to the regulatory decree, the update would occur “via a permanent flow of information, in an informal and non-systematic manner” (BRASIL, 1991).

There were two main sections in the notebooks: “PADECEME News”, addressing the most recent issues, and “Topics for Reflection”, broadening the space for debates. The best articles were selected and published in the *Revista Defesa Nacional* (National Defense Journal), which was also considered an instrument for updating military personnel.

Despite continuing to use the acronym PADECEME, from the second issue of 1995, the notebook was now called Programa de Atualização dos Diplomados pela Escola de Comando e Estado-Maior do Exército (Updating Program for Escola de Comando e Estado-Maior do Exército Graduates), substituting the term “Process”.

It was only in 2002 that PADECEME took on the journal format. The journal was now sequentially numbered and officially became quarterly publication, being registered under the number ISSN 1677-1885. The submission of works is stimulated, and the focus continues on the doctrinal updating, the debate and the improvement of Officials.

Subsequently, the tenth edition of the PADECEME journal, from 2005’s first quarter, included the subtitle “ECEME’s Scientific Journal” in its cover, opening the section “Scientific Articles” and seeking to adapt to the Brazilian standards ABNT 6021 and 6022. The selection of these articles was conducted by the journal’s editors and their publication usually had abstract and keywords in Portuguese and English. Also in 2005, the journal increased the space for the dissemination of undergraduate theses and of the studies presented at the National Meeting of Strategic Studies, which were also published in the “Scientific Articles” section.

In the following year, 2006, the journal was structured in two sections: Scientific Articles, which seeks to increase the journal’s range; and Selected Articles, maintaining the publication’s initial objective of updating graduates.

In 2007, the updating of graduates started to be conducted online, made available on the Internet. The printed magazine, while maintaining the two sections previously explained, reinforces the objectives of expanding and improving the dissemination of scientific-military knowledge produced in ECEME.

In the following issue, still in 2007, the journal was finally named *Coleção Meira Mattos: revista das ciências militares* (Meira Mattos Collection: the journal of military sciences). The title change was explained in the editorial of that issue. However, the PADECEME identification was kept on the front page, on the title page and on the index card. Furthermore, the ISSN was not changed, nor the numbering, which remained sequential.

Few changes occurred in the following years. Some presentation items were corrected, and the number of civilian contributions increased. The journal was still divulged in printed format and its distribution was free, being sent primarily to military organizations and collaborators.

A new phase for ECEME’s scientific journal began in 2011 with the creation of IMM. Seeking to broaden the dissemination of the journal and adapt it to the criteria required for a scientific publication, the Sistema de Editoração Eletrônica de Revistas (Electronic Journal Editing System – SEER), an editing software

translated and adapted from the Open Journal System (OJS) by the Instituto Brasileiro de Informação em Ciência e Tecnologia (Brazilian Institute of Information in Science and Technology – IBICT). The editorial team was trained and started the implementation of the electronic editorial process, including double blind peer review. The CMM published a single issue in 2001, already without the PACEDEME naming.

The printed format was changed in 2012, including the size of the publication and improvements in its layout. From the twenty-sixth issue, new ISSN numbers were assigned to the publication. The printed and online versions were assigned the numbers ISSN 2316-4833 and ISSN 2316-4891, respectively. During the process of learning and implementing the peer review system, CMM maintained a single section, called “Articles”.

Several corrections on the journal’s form were made in 2013 to improve its quality. The numbering remained sequential, following the title change in 2007. Volume identification was also added, considering that very year; thus, 2014 was eighth volume. Bibliographic captions and volume information were included in the footer of all pages. Titles, abstracts and keywords are available in the original language and in Portuguese and English. Considering the different changes that occurred with the CMM, a balance between the technical-normative issues and the historical link of the publication was sought.

Regarding the content aspects, internal rules were included to define the activities of all the functions of the editorial team. The blind peer review was established and starting from the thirtieth issue, all articles presented in the “Scientific Articles” sections were evaluated by at least two reviewers.

Starting in 2014, the journal was institutionally consolidated as a scientific journal, while also trying to establish itself as a new scientific publication in the academic world. The journal was regularly published until the following year, however, in 2016, it faced some issues that interrupted its publication after the first issue, returning only in 2018.

In 2019, with intensive management and restructuring efforts, the CMM has stabilized its publishing process and begins a positive cycle of publication. By performing an active management and seeking to meet quality indicators for scientific journals, CMM is now regularly publishing again. The DOI system was implemented as a way to both offer a better journal to the authors, and to measure and control the journal’s citations (h-index).

The CMM dialogue

We finally arrive at the destination of the path that gives the name to this editorial, presenting our updated Focus and Scope:

“The *Coleção Meira Mattos* is an interdisciplinary journal that publishes scientific articles related to Security, Defense and Military Sciences capable of promoting a dialogue between academics and professionals, integrating questions about the Armed Forces and Society. The journal publishes peer-reviewed articles and, occasionally, interviews and selected technical reports on current issues of interest to the area.”

The *Coleção Meira Mattos* is a journal created for and by the whole scientific community of the Defense area. It is a space for studies of relevance to academics and professionals. The journal’s current editorial and scientific councils are synonymous with scientific independence. Our guidelines and our editorial process translate the transparency we have structured in recent years.

We continue to build and expand this space, always aiming to publish important studies for the area. For such we count on the support of the entire scientific community interested in strengthening ties, whether as readers, authors or reviewers.

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Military Sciences and the configuration of the Defense Studies as a field of scientific knowledge

Las ciencias militares y la configuración de los estudios de defensa como campo de conocimiento científico

Abstract: It is a research associated with the Defense Studies, as an area of scientific knowledge, as far as the scientific sciences perspective is concerned, in the Post-Graduation Programs of the Specialized Studies Schools of the Armed Forces in Brazil. The qualitative methodology was used, from the documental analysis technique, observing primary sources (legislation) and secondary sources. The taxonomy, theoretical and conceptual milestones of the Military Sciences and correlates, inserted in the process of evolution of the Defense Studies in the Country, with emphasis to the role of the School of Command and General Staff of the Army.

Keywords: National Defense. Post-graduation studies. Armed forces. Army (Brazil). ECEME (Brazilian Army Command and General Staff School).

Resumen: Se trata de una investigación asociada a los Estudios de Defensa, como área del conocimiento científico, en lo que concierne a la perspectiva de científicidad de las Ciencias Militares, en particular en los Programas de Posgrado de las Escuelas de Estudios Especializados de las Fuerzas Armadas en Brasil. Se utilizó la metodología cualitativa, a partir de la técnica de análisis documental, observadas fuentes primarias (legislación) y secundarias. Se abordan la taxonomía, marcos teóricos y conceptuales de las Ciencias Militares y correlatas, que se inserta en el proceso de evolución de los Estudios de Defensa en el país, con énfasis en el papel de la Escuela de Comando y Estado Mayor del Ejército.

Palabras clave: Defensa Nacional. Posgraduación. Fuerzas Armadas. Ejército (Brasil). ECEME.

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1 Introduction^{1 2}

The concept of the area of knowledge, as well as any taxonomy used to systematize it, is imperfect. In Brazil, the topic has been developed by the National Council for Scientific and Technological Development (CNPq), which consolidates research by editing the TAC. A currently in force had consolidated in 1984, but despite a strong review effort conducted in 2005, it had noted that the proposed update had widely rejected by the universe of researchers, which is why the intention had discontinued. Since a more substantial revision was not possible, the TAC 1984 still exists and is subject to insertions and refinements, such as the insertion of the “Military Career Area” in the “Great Area: Others” (BRASIL, 1984). The unapproved version presented new areas, such as Sociology of National Defense, Military Sociology, History of Military Strategies, History of Military Institutions and Military History (BRASIL, 2005).

The maturation and the affirmation of an area of scientific knowledge, for Domingos Neto *et al.* (2012), is due to the demands and pressures of professionals, besides governmental measures. In the Country, he understands that the establishment of the Defense area occurs with the absence of a joint work of professionals to exert such pressure.

Complementarily, Saint-Pierre *et al.* (2012) postulates that the consignment of the theme and the area is a political construction. He understands that Defense only makes sense if viewed from a perspective that glimpses the position of the countries in the world, composing a theme of profound relevance and promoting object analysis in epistemic construction.

It, for the establishment of a scientific concept associated with the term Defense, is convenient to reflect on the difference between scientific area and field of studies. In summary, by scientific area, we have the set of researchers who share perspectives (ontology), content (epistemology) and methods. It is, therefore, a homogeneous set of knowledge and theories, applied to different objects. On the other hand, and also in synthesis, the field of studies is the denomination of the opposite pole, that is, the set of researchers who, having similar or different perspectives, as well as same or different contents and methods, devote to investigate a common object of reflection.

The perceptions of such concepts in defense studies are not homogeneous so that there are researchers who tend to highlight the relevance of the area, while managing to deny their scientific, suggesting that it is a field of study rather than a field of study. Scientific area. Within the focus, Raza (2004), as the opening words of his publication, postulates that “there is a lot of rhetoric in defense studies, many experiential narratives and little conceptual ballast.”

1 This present communication of results is part of the authors' efforts in the framework of the project: “Rede Nacional de Estudos Estratégicos” (“National Network for Strategic Studies”) (Pro-Strategy / CAPES - Coordination for the Improvement of University Personnel). Also, for the second author, it is a consequence of actions developed in the context of the projects “The conduct of defense policy in Brazil and in comparative perspective” (Pro-Strategy / CAPES) and “Research in Military University Education: from Policies to Practices” (CAPES - Coordination for the Improvement of University Personnel / PNPd - (National Program of Post-doctorate).

2 The contents of this article were initially developed in support of the participation of the second author in the Seminar “Post-graduate Teaching in Security & Defense”, organized by the Coordination of Improvement of Higher Education Personnel (CAPES), and in the working group “Defense as an area of knowledge” organized by the Ministry of Defense the following year.

Domingos Neto (2013) clarifies what would be the studies of Defense, positioning them as “scientific investigations targeting the armed forces and defense policies,” exploring issues such as war and peace, international security, defense industry, scientific and technological development policies, and geopolitical formulations, as well as other topics of interest.

The taxonomies proposed by CNPq and by the Coordination for the Improvement of Higher Education Personnel (CAPES) adopt, predominantly, the perspective of scientific fields. It’s why the word science precedes the denomination of the Colleges of many great areas and some of the fields and, as a relevant example, the Great Area of Human Sciences, which includes the fields of Political Science and International Relations, of the College of Humanities (BRASIL, 2016a).

However, this debate is old, not consensual and practically inexhaustible. Also, specific class associations are constituted around the theoretical, conceptual unit, like the Brazilian Association of Political Science (ABCP) and the Brazilian Association of International Relations (ABRI), among others. Differently, there are cases in which they had constituted due to adherence to the same object of study, such as the Brazilian Association of Defense Studies (ABED). However, it is essential to refer to the absolute preponderance of the views associated with the scientific areas, to the detriment of the miniature approaches of fields of study.

On the subject of adherence, the Ministry of Defense (MD) has already positioned itself on the issue, highlighting in Defense Studies, Military Sciences, the constituent of the three Forces Singular, as a scientific area, with autonomy to military thinking in Defense. It should have noted that the current conception is consistent with the international scenario, such as the taxonomy model adopted in the military in Portugal (2009), where there is military science, naval military science, and military aeronautical science.

Within this scope, it is observed, therefore, that both the Military Sciences and the Defense Studies have configured thematic of growing relevance in the national and international academic community. This phenomenon encourages this increase of discussions about its forms of study, visions, scientific and epistemological approaches, as well as the understanding of aspects related to its multidisciplinary character.

Thus, this discussion aims to shed light on the elements associated with the scientific perspective of the studies of the Military Sciences in the Brazilian Armed Forces (FA), more in particular in the Brazilian Army (EB), and of the Defense studies, as knowledge area scientific. To deal with the problem, in terms of technical-methodological procedures, documentary research was used, from primary sources.

2 Conceptual frameworks

According to the European Commission’s Community Research and Development Information Service (CORDIS), the general scientific areas encompass Health Sciences, Humanities, Natural Sciences, Physical Sciences, Social Sciences, Educational Sciences, and Technological Sciences, which have several subdivisions.

The taxonomy explicitly referring to Military Science integrates it, into the general scientific area of Social Sciences (in a broad sense), through the specific scientific area of Political Sciences (in a narrow sense) and of the particular scientific sub-area of Policy Studies Analogously, Defense Studies are situated within the same level, embedded in the same structural subordination (CORDIS, 2007).

Chart 1 - Classification of Scientific Areas.

Level	Scientific Areas	Code
1º	Social Sciences (General Scientific Area)	05
2º	Political Science (Specific Scientific Area)	05.11
3º	Policy Studies (Specific Scientific Subarea)	05.11.02
4º	Defense Studies	05.11.02.01
	Development Policies	05.11.02.02
	Policies of the European Union	05.11.02.03
	International Policy	05.11.02.04
	International relations	05.11.02.05
	International Studies	05.11.02.06
	Military Science	05.11.02.07
	Transportation Policy	05.11.02.08
2º	Technology	06.03
3º	Military Technology	06.03.25

Source: CORDIS (2007), adapted by the authors

The terms Security and Defense are customarily confused in the national vocabulary. Definitions, interpretations and approaches presented in the academic context, a national defense policy of the PND (BRASIL, 2012a) define security as “a condition that allows the country to preserve its sovereignty and territorial, to print its national interests, free of pressures”. and networks, and use the rights of the constitutional rights and constitutional duties, is such as the freedom of freedom of State, of the rights of interest, boundary rights, boundary rights In turn, it states that “National Defense is the set of measures and actions of the State, with an emphasis on the military field, for the defense of territory, sovereignty, and national interests against preponderantly external, potential or manifest threats”, which already transcends for effective action in order to obtain or maintain a certain degree of safety.

Within this line, another perspective of insertion in areas and subareas is the proposal presented by the MD to CAPES and CNPq. It is possibly an approach where organizational vision prevailed, to the detriment of a greater epistemological reflection, so that, despite being included in the National Postgraduate Plan (PNPG) 2011-2020, as detailed in the table below, it obtained little, or no, acceptance with the scientific community.

Chart 2 - Composition of the National Defense and Security Area.

Area	Sub-areas
National Defense and Security	National Defense Policies and Strategies
	Defense Technologies
	Joint Military Sciences
	Marine Military Sciences
	Military Land Sciences
	Aerospace Military Sciences
	Public security

Source: CAPES (BRASIL, 2010c, p. 336), adapted by the authors

3 Military Sciences – initial theoretical milestones

The studies of the war, of the military history, and consequently of the Military Sciences, do not date back to this century. As an example, at the same time, Strachan (1983, p. 6 apud SMITH, 2004, p. 56) points out that in eighteenth-century Germany, sixteen new military-related journals appeared between 1766 and 1790.

In century XIX, other compendiums that came to be diffused were the military dictionaries, like the one of Fernandez Mancheño, that dates from 1822 constituting a source of portable consultation or alphabetical compilation of all terms proper to the military sciences, explaining the work of the military and their obligations and different types of troops, different types of ancient and modern weapons, and war machines of the time (JOVER, 2008).

However, the first dictionary: *Diccionario de Ciencias Militares*, specifically, it was published in 1895, by Don Mariano Rubió y Bellvé in Barcelona, consisting of three volumes of 986, 1015 and 963 pages, respectively. Includes items related to history, military biography and bibliography, military training, special tactics, creation and organization of armies, administration, health, military health, law, military justice, military virtues, offensive weapons (portable, artillery, gunpowder, explosives, etc.), defense weapons, topography, military geography, geology, fortification, mines, campaign of various studies, means of communication and transport, military navy, mobilization of armies, concentration, strategy, general tactics, the laws and customs of war. In that document, the Military Sciences were defined as

[...] all disciplines, whose knowledge directly interests the conduct of the War. Military Science analyzes, examines, compares, and deduces, while the Military Art carries out [...] being Sociology the domain of knowledge concerning the existence of human societies, the Military Sciences are an integral part of Sociology (BELLVÉ, 1895, our translation).

Raleiras (2012, p. 190) infers that the definition presented could already be concluded that Science and Military Art were already considered inseparable aspects in the conduct of the War.

In addition, Mello (1849, p. 9 apud RALEIRAS, 2012, p. 190, our translation) highlighted that “Among all the arts and sciences known, the art of war is undoubtedly the oldest. [...] The military sciences and those who are ancillary to it are at present undergoing appalling development.”

4 Military Sciences - recent theoretical milestones

Bogdanov (2004, p. 182, our translation) places war as one of the most complex phenomena of human life, whereas the aims of war and its art [...] constitute the theoretical basis of the military sciences.

Also, Domingos Neto (2006, p. 144, our translation) thought that from a national perspective, “this new area of knowledge would comprise the following sub-areas: Strategic Thinking, Defense and Security Policies, Military Studies and Defense Institutions.”

Saint-Pierre (2012, p. 159, our translation) postulates that “there is a medium field in which academics and military meet to reflect and discuss war, strategy and defense, enriching the pragmatic reflection of the military and sharpening up the epistemic thinking of academics”.

It had thus realized in a conclusive way that the Clausewitzian theory must be considered a scientific method because it meets the rigorous demands of contemporary epistemology (DINIZ, 2010, 82). Also, considering the various concepts analyzed and endorsed by Raleiras (2012, p. 192), it is inferred that the Military Sciences are an organized and systematized body of knowledge, in addition to having their principles, methods, techniques, and technologies, whose purpose is the employment of armed forces. It adds that the experience gives substance to the doctrine of work of the troops, where the principles of war and military operations abound. The methodology that is carried out to approach and solve problems is specific and is translated into military decision-making (situation analysis) at the tactical level and in the operational art at the practical level of the war. The purpose is unique and relates to the organization, preparation, and employment of FAs for the conduct of war and the attainment of peace. It had also deduced that “the Military Sciences are an autonomous scientific domain characterized by a system of knowledge related to the study of the war phenomenon, the application of military coercion and the use of armed force.”

5 Military Sciences and correlates in the Brazilian Armed Force

The current Brazilian system of higher education counts for about two decades, whose current conception had regulated in the Law of Directives and Bases of National Education (LDB) - Law 9,394 / 96 (BRASIL, 1996).

In the scope of the Military Sciences, it is fundamental to emphasize its Art. 83, which deals with military education, classifying it as “regulated by a specific law, admitted to an equivalence of studies, according to the norms fixed by the educational systems.” It is therefore autonomous, reproducing the tradition of more than two hundred years of the Country, while also repeating the content of the first LDB – Law 4.024 / 61 (BRASIL, 1961), in which it had in the single paragraph of Art. Military education shall have regulated by special law.

EB was the first FA to issue its legislation. It is therefore also relevant to observe Law No. 9786, of February 8, 1999 (BRASIL, 1999a), known as the Law on Teaching in the Army (LEEx), from which it is extracted that “courses held in educational establishments military training by holders of posts at the higher level constitute, for university purposes, postgraduate courses, provided that the relevant legislation had complied with, “as well as that” the training courses for officers of the Agulhas Negras Military Academy are of university degree, giving its graduates a Bachelor’s Degree in Military Science.

With the support of Decree, number: 3,182, of September 23, 1999 (BRASIL, 1999b, our translation), which regulates LEEx, the establishment of masters and doctorates is verified, as can be seen from its article: 15, with the wording: “Postgraduate programs complementing undergraduate and university education have masters and doctorate programs and curricula for further education, specialization, and other courses.” Thus, the School of Command and Army Staff (ECEME) started to have the efforts channeled, in the scope of Military Sciences and Politics, Strategy and High Military Administration, to doctoral and master’s degree courses in Military Sciences. To the School of Improvement of Officers (GAO) the professional depths covered late and strict sense levels in Military Operations.

Also, the crucial milestone for the Military Sciences is dated March 22, 2002 (BRASIL, 2002), when the Minister of State for Education approved, in the Official Gazette of the Union, Opinion no. 1,295/2001, of the National Council of Education (BRASIL, 2001), which established the rules regarding admission of equivalence of studies and inclusion of Military Sciences in the role of the sciences studied in the country.

In the Brazilian Navy, the regulatory framework is Law No. 11,279 of February 9, 2006, which provides for the teaching of the Force (BRASIL, 2006). From this, the educational establishments responsible for higher education courses were defined. Naval Sciences: the Naval School, for the graduation and the Naval War School (EGN), in the postgraduate. In addition, Decree No. 6.883, dated June 25, 2009, which regulates the Law on Teaching in the Navy, establishes that, at the *district sensu* level, the General Officers Course for Senior Officials (C-EMOS) confers the master’s degree in Naval Sciences; and the Maritime Policy and Strategy Course (C-PEM) or the Ph.D. course (BRASIL, 2009a). Also, linked to the Center of Political-Strategic Studies of EGN there is the Professional Master in Maritime Studies, recommended by CAPES. It presents as a concentration area the Security, Defense, and Maritime Strategy and has, as of research lines, the Maritime Policy and Strategy; Regulation of the use of the sea and *Cenarización*; and Science, Technology, Innovation, and Maritime Power.

In turn, the Brazilian Air Force, through Law Nº. 12,464, of August 12, 2011, which provides for its teaching, gives the training courses of Airmen, Intendants and Infantry officers of the Air Force Academy the baccalaureate in Aeronautical Sciences, Logistics Sciences and Military Sciences, respectively, in addition to a degree in administration. ROCA 21-6, Regulations of the University of the Air Force (UNIFA), approved by Concierge nº 335 / GC3, of April 27, 2009, of the Commander of Aeronautics, establishes that UNIFA is responsible for “developing Postgraduate Programs in Aerospace Sciences and other areas of interest of COMAER, including master’s and doctorate” (BRASIL, 2009b). It, in addition to the military courses, conducts the Professional Master’s Degree in Aerospace Sciences, whose area of concentration is Aerospace Power and Contemporary Strategic Political Thinking and which presents as a research line

the Brazilian Aerospace, Security and Defense Power; and the Relationship between States, Contemporary Strategic Thinking and Aerospace Power.

6 Military Sciences – ECEME Postgraduate Program

The ECEME, the highest level of education of the Brazilian Army and whose mission is to prepare senior officers for the exercise of General Staff roles, Command, Command, Direction and Advice to the highest levels of the Land Force, cooperates with the General and Sectorial Directorate in the development of the Military Doctrine for the preparation and the employment of the Land Force.

Once the national legal frameworks and the Brazilian Army were established, the organizational structure was adopted, and the regular courses were started. By directive of the Army Staff (EME) in 2000, the Center for Strategic Studies of ECEME was created. Nunes (2012) recalls that ECEME's Postgraduate Program (PPG) was established in 2001, under the responsibility of the newly organized Postgraduate Section (SPG), being the first specialization in Military Sciences. At that moment the Master's course was started, made effective in 2003, to which had added, as of 2005, the Ph.D. course in Military Sciences. At the time, the PPG had a full identity with the Command, and Staff Course (CCEM), which is due to an internal competition in the EB, absorbing about 20% of each class of officers graduated in Military Sciences by the Military Academy of *Agulhas Negras* (AMAN). His academic credits were equivalent to those offered to the CCCEM, and the difference in degree would have associated with the depth of the researcher's job and the presentation of the thesis in three years or dissertation in two.

In 2005, CAPES, in partnership with the MD, started the Program of Support for Teaching and Scientific and Technological Research in National Defense (Pro-Defense). In collaboration with *Fluminense Federal University*, ECEME developed the "*Rede Brasil Defesa*" initiative, in which vacancies were made available for the training of instructors with the PPG in Political Science of that university. In 2008, the CAPES-MD initiative had reissued, at which time an association had established between *Fundação Getúlio Vargas* (FGV) and ECEME, which succeeded in approving the project "Strategic Defense Management," contributing to the qualification of School under the PPG in Administration.

It observed that, in little more than a decade, the legal bases and the organizational structures that led to the reformulation of the research and the postgraduate in the ECEME had established. A model based on scientific research was conceived and implemented, having as main scope the study of the Military Sciences and Military Policy, Strategy, and Administration. Under this approach, we seek to serve both the purpose of research production and to increase the knowledge available in EB and to support a more comprehensive and consistent training of the General Staff Officer and High-Level Advisor (MIGON, 2015).

It was in this spirit that the Meira Mattos Institute (IMM) was created, through Ordinance No. 724, dated September 6, 2012, of the Army Commander (BRASIL, 2012). Its denomination is homage and reference that recognize the importance and the contribution of the past, but that define an organizational structure and functional design as a response to current and future challenges.

IMM's implementation efforts go back to 2011, with the reorganization of the Strategy and Administration Section, the Postgraduate Section and the Center for Strategic Studies. It

is also intended to coordinate, guide, develop and disseminate scientific research, postgraduate studies, and studies in Military Sciences and Security & Defense; create Postgraduate opportunities for military and civilians in these areas; Contribute to the improvement of regular school courses; collaborate in the development of the training of the postgraduate professors of the EB and to promote the academic exchange with institutions of the superior education (IES) civil and military. Also, it guides and supervises the publication of the scientific journal – Meira Mattos Collection - the magazine of the Military Sciences.

Consequently, IMIM was instrumental in the creation of a new structure subordinated to ECEME which, at the same time, allowed all necessary support for academic activities, as well as took charge of the guidelines and coordination of actions related to teaching, teaching, research, production, dissemination, cataloging, bibliographic collection, academic events, exchanges and partnerships. It thus brings ECEME closer to its vision of the future and also contributes to the desirable synergy with the civilian educational environment, addressed in the White Paper on National Defense - BRBIL, 2012b concerning the Education and Culture System, since it allows the School to count on the local segment in its teaching and student bodies, as well as improving its research and postgraduate programs.

Within the context of the National System of Higher Education, especially the *strict sensu* postgraduate course, the alignment of the ECEME Postgraduate Program in Military Sciences (PPGCM) meets the requirements of the PNPG 2011-2020 (BRASIL, 2010c), both in the area of knowledge, as well as in the subarea and lines of research proposed in the aforementioned Plan for National Defense and Security.

In the area of National Defense, two lines of research structure the PPGCM, namely: Defense Management, which investigates the set of administrative activities related to military power, aiming at planning, organizing, coordinating and controlling personnel of the resources and installations of the Armed Forces; and Studies on Peace and War, which inquiries into the phenomenon of war, peace and conflict.

Table 3 - Area of Concentration and Lines of Research of the PPGCM.

Area	Research lines	Priority issues
National Defense	Defense Management	<ol style="list-style-type: none"> 1. Management in Military Environments (management of Military Organizations, Human Resources, Facilities, Health, Teaching, etc.) 2. Public Management (budgetary and financial management, patrimonial, etc.). 3. Strategic and Military Leadership 4. Process Management 5. Project Management 6. Defense Economics 7. Defense Industry 8. Defense Logistics 9. Military Mobilization 10. Science, Technology, and Innovation in Defense 11. Techniques and Methods of Research

continue

Table 3 - Continuation

Area	Research lines	Priority issues
National Defense	Peace and War Studies	<ol style="list-style-type: none"> 1. Theory of War and Epistemology of Military Sciences 2. Defense Policy and Strategy 3. Military Strategy and Politics 4. Security and Defense 5. Geopolitics 6. Prospective Studies 7. International Relations 8. Organizational and Military History 9. Doctrine (Comparative Doctrine, Efficiency & Effectiveness, Preparation & Employment, Combat Functions & Operating Systems, etc.) 10. Military Operations (Combined, Joint, Pacification, Peace, GLO - law and order enforcement, etc.)

Source: Brazil (2016b).

7 Military Sciences – new institutional milestones in EB

Over the past five years, conceptual developments have accelerated, with new institutional frameworks had established. At the end of 2010, the Army Transformation Process began, which has as one of its structuring pillars the Education and Culture vector, from which it intended to implant and strengthen the capacity for innovation, a critical requirement for military performance in the 21st century (BRASIL, 2010a).

In the same year, the Army Commander established his guidelines for the period 2011-2014 (BRASIL, 2010b). In the same year, the Army Commander established his guidelines for the period 2011-2014 (BRASIL, 2010b). Among those of interest to the Education and Culture system is the determination, among others, to “encourage the study of strategy, military history, leadership, management, international humanitarian law, international relations, and war trends” and “create courses for civilians (potential opinion formers) in ECEME.” Specifically, in the case of postgraduate studies, there is a determination to “seek alignment between research and doctrinal development” and “to expand the exchange with the civil academic environment in the areas of scientific research, education and culture, in order to our intellectual capital and ensure greater dissemination of the values and competence of EB in the educational field.”

Relevant role in the process of responding to the new challenges is the one performed by the Coordinating Office for Evaluation and Development of Military Higher Education in the Army (CADES), which advises the Department of Education and Culture of the Army (DECEX) in “formulating policies that support autonomy of military higher education”, as well as guides, supervises and provides normative conditions for the operation of postgraduate and scientific research (BRASIL, 2011b).

The Military Higher Education System in the Army (SESME) conducted within the scope of DECEX is based on LEEEX and the Decree regulatory, by which the credits of the disciplines of the regular courses of the career (courses of specialization, and military studies) are taken advantage of by postgraduate programs, allowing the equivalence of studies.

Thus, specialization courses confer the postgraduate degrees of specialization in Military Sciences, whose equivalence to other classes, defined in Resolution No. 001/2001, was ratified by Interministerial Normative Ordinance No. 18 of November 13, 2008 (BRASIL, 2008). The course of improvement of the EsAO can confer the degrees of specialist or professional master in Military Operations and the Courses of High Military Studies (CAEM), composed by the courses of Command and General Staff (CCEM), Head and Staff for Officers Doctors (CCEM / Med), Command and Staff for Officers of Nations (CCEM / ONA) and Direction for Military Engineers (CDEM), may confer the degrees of specialist, academic master or doctorate in Military Sciences.

In addition, the Policy, Strategy and Senior Administration Course of the Army (CPEAEx), which aims to increase knowledge for officers already possessing the CAEM (Courses of Specialized Military Studies) and to enable officers who don't have this course, graduates the students with specialization in Military Sciences, with emphasis on Politics, Strategy and High Administration of the Army or with the post-doctorate degree in National Defense, for officers who already hold the title of doctor. In turn, more recently, the International Strategic Studies Course (CIEE) was established, with the purpose of promoting the exchange of knowledge and experiences between senior officers of the Brazilian Army and friendly nations, as well as to know the most relevant aspects of the country in the political, military, social, economic and scientific-technological fields, being equivalent to the *lato sensu* post-graduation in Strategic Studies.

Within this scope, given the transformation conception and the Commander's guideline, the established objectives and goals within the range of the Army's strategic planning are being fulfilled, among which:

- To implement a new and effective Education and Culture System: Permanent updating of the Education and Culture System; Education focused on the Age of Knowledge; and Adequacy of Education and Culture infrastructure.
- To expand the integration of the Army to society: greater integration with the academic environment; and the realization of agreements and partnerships.
- To develop the essential competencies of the military professional: Development of basic skills, such as interpersonal skills, reflection, critical analysis, and critical thinking, as well as other skills needed by the military professional;
- To contribute to the development in the areas of Doctrine and Personnel: Increase the production of scientific research applicable to the Army (BRASIL, 2010b, our translation).

8 Military sciences – academic advances

In order to meet the higher demands, ECEME has updated its strategic planning, from which the intention is “to be recognized, by 2020, nationally and internationally, in the field of military sciences, as a center of excellence in the areas of teaching, research, and doctrine, “and some of the organizational strategic objectives are” to keep ECEME's teaching in constant evolution, contributing to the implementation of a new and effective Military Higher Education System “and to” improve the

production and dissemination of knowledge in the area of the Military Sciences, contributing to the integration of the Army with society”.

Santos (2015) recalls that the PPGCM has an interdisciplinary character, prioritizing the study of Military Sciences and its interlocution with other areas of knowledge, especially in the Humanities and Applied Social Sciences. As a result of the maturation and better structuring of the PPG, ECEME had its *strict sensu* course of Academic Master's Degree in Military Sciences recommended by CAPES on November 23, 2012 and recognized by the Ministry of Education (MEC), through Ministerial Ordinance No. 009, from October 10, 2013, reaching note three. It then became the only academic course with dual certification, being recognized in the military education system (SESME) and the national education system (CAPES), unrestrictedly with military and civilian students, who, in the first group, in 2014, there were four.

The reinforcement of the PPGCM and the scientific of the Military Sciences have been strengthened by the establishment of research agreements with other higher education institutions, based on the Pro-Defense Program (CAPES partnership with the MD) and the Pro-strategy Program CAPES with the Strategic Affairs Secretariat of the Presidency of the Republic). The strengthening of the PPGCM (Post-graduation Program in Military Sciences) and the scientific of the Military Sciences have been strengthened by the establishment of research agreements with other university education institutions, based on the Pro-Defense Program (CAPES partnership with the Ministry of Defense) and in the Program: Pro-strategy (Pro-strategy program), (CAPES partnership with the Secretariat for Strategic Affairs of the Presidency of the Republic). In this aspect, PPGCM professors are part of research teams within the scope of cooperation established with the University of São Paulo (USP) and the interinstitutional program of the São Paulo Universities - San Tiago Dantas Program, a partnership of the State University of São Paulo (UNESP), State University of Campinas (UNICAMP) and Pontifical Catholic University (PUC-SP), both under the Pro-Defense program. At the same time, research partnerships are in progress, linked to the Pro-Strategy program, with the Brazilian School of Public Administration and Business (EBAPE / FGV), Federal University of Pernambuco (UFPE), *Federal University of Rio Grande do Sul* (UFRGS), UNIFA and with the program San Tiago Dantas.

In 2013, at the head of a new process, ECEME began to participate in the National Postdoctoral Plan (PNPD), launching a call for candidates to be selected for an original post available for postdoctoral training in Military Sciences. The selected researcher received a CAPES scholarship to conduct theoretical and empirical research in an integrated manner with one of the faculty/researchers of the permanent body of the PPGCM. (Postgraduate Program in Military Sciences). Despite the efforts of the Military Sciences in ECEME, in the post-graduation area.

Despite the efforts of the Military Sciences in ECEME, in the postgraduate area, to focus, at the moment, on the necessary adjustments to meet the requirements and requirements established by CAPES, so that the academic master's course is perfectly aligned with MEC guidelines and achieved the desired prestige in the national academic setting, in August 2015, the Department of Research and Postgraduate Studies (DPPG) sought to take a higher flight. With the expertise acquired with this course and the fruit of the moment of new academic and professional qualification, there was the presentation of a new course proposal (APCN), in operation, for evaluation in CAPES - the Ph.D. in Military Sciences. After a visit to the Political Sciences and International Relations Evaluation Area, held at ECEME, on March 15, 2016, on the occasion of the 164th Meeting of the Scientific

Technical Council of Higher Education (CTC-ES) of CAPES, held in the May 30 to June 3 of the same year, the course was recommended to the recognition of the National Education Council (BRASIL, 2016a), registering as date of beginning of operation on June 6, 2016, and the subsequent possibility of universal offer to the society, reinforcing the area of concentration of National Defense.

9 Scientific insertion of Defense Studies

Nunes (2012) affirms that the scenario of changes in the post-Cold War world scenario would have been boosted in Brazil by the initiatives resulting from the first edition of the National Defense Policy – PDN (BRASIL, 1996) and the creation of the MD, in 1999. It also adds that the national agenda has incorporated the theme of security and defense, increasing the involvement of society, with increasing relevance.

Raza (2004) highlights the two factors that give specificity to Defense science, to distinguish it from other disciplines. These would be the nature of the object of its study (the Defense) and its conceptual system associated with a set of norms and practices that assure the requirements of causality, empiricism, and systematic. It is a proper theoretical construction, but it diverges, insofar as the Defense Studies seem to consolidate much more a community gathered by those interested in the same object of study, using different scientific perspectives, than a unit of aspect focusing on distinct objects of reflection.

Another approach is related to the ontology of the term Defense, as a taxonomic (scientific classification) of words and contents inherent to the Military Sciences. Also, another approach to an epistemology of the same name would be that of an extremely complex study, where one seeks to obtain knowledge of science beyond its practical applicability. Their philosophical foundations, their historical bases, their evolution in time and space, are raised, trying to position the professional that uses the content, in the context of the contemporary world.

As contribution, we present an adaptation of Accounting Theory (SÁ, 2010), about relevant requirements that allow the Defense to be comprehended as a Science.

Table 4 - Scientific Requirements Fulfilled by Defense Studies.

Logical Requirements Needed for a Science	Requirements met by Defense Studies
To have an OBJECT or specific subject of studies	The use of the field of Military Power in maintaining the integrity of the national territory, supporting government actions and maintaining law and order in the various operational environments is the subject of specific studies.
To analyze the object under a peculiar aspect	Analysis of the Field of Military Power under the aspect of strategic or tactical military operations.
To possess basic METHODS of object study	Situation examination of the tactical commander is one of the basic methods of studying the object.
To raise valid assumptions	Hypotheses about the Principles of War, such as economy of means, employment of mass, etc., for example, are frequent.
To study the phenomena with ANALYTICAL rigor	Analysis of the opposite lines of action is an example of a study of the phenomenon with analytical rigor.

continue

Table 4 - Continuation

Logical Requirements Needed for a Science	Requirements met by Defense Studies
To enunciate TRUTHS of universal value	For example, in defense of passive regions, means for employment on more significant fronts will be able to be saved.
To allow FORECASTS	The Operations Orders, which are defined after the Commander's Situation Survey, allow for the prediction of the conduct of the military operation.
To welcome DOCTRINAL CHAINS	Particularly in this respect, the study of defense does not admit the reception of doctrinal chains. The doctrine is adopted after studies and applied in a single version, which may evolve as a result of new studies and lessons learned,
To have OWN THEORIES	The Principles of War are examples of proper theories of Defense
To be based on knowledge gained, of a TRADITIONAL nature	Millennial is the accumulation of knowledge in Defense.
To provide usefulness	National Sovereignty

Source: Sá (2010), adapted by the authors.

Therefore, the definitions of the epistemology and the ontology of the term Defense, in addition to its object, due to its complexities, require an in-depth study in a multidisciplinary team, composed of the military of the three forces, pedagogues, philosophers, psychologists, among other specialists.

It is understood that research in defense aims to contribute to the advancement of knowledge in the area, to enable scientific production in Defense at levels compatible with the requirements for the creation of an area of expertise, to form critical mass in researchers, recognized nationally and internationally in Defense; and increase the exchange of HEIs and military and civil research centers.

Regarding the approach between the teachings of Defense and the Military, one has that this one is autonomous and independent, regulated by own law. The regular courses of the three singular forces, at the levels of training, improvement and high studies, should be conducted in a differentiated way from the national education system, which allows those focused on training for functional career performance not to undergo system evaluation MEC/CAPES.

Regardless of the option of insertion, it is understood that Military education, differently, is specific context, de facto and right. The scientific of the Military Sciences is an indication of the specificity, just as the structure and education system of the Armed Forces also corroborate the perspective. With the same meaning, the current legal frameworks reinforce the assertion, such as the Law on Guidelines and Bases of National Education (Art. 83) and the Law on Teaching the Army, among others.

It is understood, therefore, that the definitions of Defense and Military education can have different and complementary conceptualizations. The first one seems to have as objective the formation of a critical mass of masters and doctors, at national level, for teaching and research, mainly aiming at advancing knowledge in Defense while the Military had focused on the qualification of the military professional who will occupy positions and perform functions strictly linked to the employment of the Armed Forces.

Complementarily, Nunes (2012) comments that the academic environment has occupied important space in this agenda and that the inclusion of the Military Sciences in the

list of sciences studied by the National Education Council, as well as the insertion, in PNPB (National Post-graduation Plan) 2011-2020, of an area of National Defense and Security, with the forecast of resources of fomentation and scholarships inside and outside the Country, would be milestones of a new context for the studies of security and defense in Brazil. As a theoretical potential of the Defense Studies model, in perspective, of this integrated academic model, among the Military, Defense and related sciences, the following table is presented:

Table 5 - Theoretical potential of the Defense Studies model.

Post-graduation program	Universities	Areas of Concentration
Aerospace Sciences (PPGCA)	UNIFA	Aerospace Sciences and Political-Strategic Thinking
Military Sciences (PPGCM)	ECEME	National Defense
International Strategic Studies (PPGEEI)	UFRGS	Security, Integration and Development
Maritime Studies (PPGEM)	EGN	Security, Defense, and Maritime Strategy
Strategic, Defense and Security Studies (PPGEST)	Universidade Federal Fluminense (UFF)	National defense and political power Theory and analysis of international relations and international security
San Tiago Dantas (PPG-STD)	UNESP	Peace, Defense, and International Security

Source: authors

10 Final considerations

This paper discusses the elements associated with the scientific perspective of the studies of the Military Sciences in the Brazilian FA, with a deepening in the BS, and of the Defense studies, as an area of scientific knowledge.

It had verified that the teaching and research within the scope of the ECEME, especially in what concerns the Military Sciences, has undergone an intense process of transformation. Under new regulatory frameworks, as well as taking into account the vision and strategic objectives of the superior bodies and of the School itself, a new organizational structure had conceived and organized, from which the supply of disciplines was expanded, as well as the rigor and quality of the scientific production.

DECEx, through the Research in Military Sciences and Consolidation of Research and Development in Military Sciences projects, led by the Trompowsky Foundation, enabled the expansion of the insertion of the Military Sciences in the national and international academic segments. Ongoing innovations have a potential for overflowing throughout the EB, armies of friendly nations, MD and for society at large. In the medium and long term, as a consequence of the formation of civilians, reflections are expected in the scope of the Federal Administration (MD, Secretariat for Strategic Affairs, etc.) and the companies of the Industrial Defense Base. Due to the capillarity of the teaching and research actions of the PPGCM and other Programs, reflections had visualized along with an extensive academic, civil and military segment: CNPq, CAPES and all the institutions that interact with the teaching and research agenda in Defense.

Also, it had reached the understanding that the existence of a scientific approach proper to the Military Sciences does not deny the presence of an epistemic community agglutinated in function of the object of studies, that is to say, the Defense. Some researchers, as commented, still perceive the Defense as a dependent of a multidisciplinary theoretical breviary to affect its expression or even again observe it with complexity, concerning the conceptualization of its object of study and the identification of the specificity of the delimitation of its field of action.

It had understood that the Defense Studies still present structural deficiencies, absent in sciences in the process of consolidation. Consequently, there is room for debate on issues, which make them more understandable together with other disciplines, being, instead, more than a science, but the expression of a set of demands that involve the terminology itself.

However, for the sake of clarity, it is essential to highlight the fact that, within CAPES, that is to say, postgraduate level *strict sensu*, efforts should be made to strengthen the insertion of both perspectives – the scientific area of the study of Military Sciences and the inclusion of the Field of Studies of Defense –, assuring legitimacy and strengthening the efforts already underway in the systems of education of the Forces Singulars. Meanwhile, at CNPq, where research is being carried out - from studies in progress, there is a greater possibility of insertion of the topic Defense or Defense Studies. While within the scope of the CNPq (National Council for Scientific and Technological Development), where the research – object of studies – is being systematized, there is a greater possibility of insertion of the topic Defense or Defense Studies.

In both contexts, it should also be noted that, as a consequence of the perspectives (ontology) and contents (epistemology), it is important to differentiate the insertion, in CAPES and CNPq, of proposals related to Defense, in substantive terms, in relation to those related to Defense, in adjective terms. The convenience of differentiating Defense in a central nucleus - the study of war and conflicts – and complementary core do not denote greater or lesser relevance to any of the nuclei, but rather the differentiation of perspectives and contents. The theme was widely debated by the MD and Singular Forces together with CAPES and the National Research Agenda Commission during 2014.

Finally, it is only from the publicity of the theme, from the extension of the numbers of specialized scholars and from reflections, that it is possible to perceive, in spite of the path to be followed, that the scope of scientific, as well as the establishment of the area of knowledge, may advance of this construct, surpassing taxonomic peculiarities, amplifying the epistemological foundations and reaching the construction of the synergistic scientific maturation, in a broad spectrum.

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Developing a security and defense thought in the Brazilian academy: case study of the partnership between NERINT and NEE/CMS

La construcción del pensamiento en seguridad y defensa en la academia brasileña: estudio de caso de la asociación entre NERINT y NEE/CMS

Abstract: This paper seeks to offer a study of the cooperation between the Brazilian Center for Strategy and International Relations (NERINT) of the Federal University of Rio Grande do Sul (UFRGS) and the Center for Strategic Studies of the Southern Military Command (NEE/CMS) in the construction of a common mentality on Brazil's international security interests, national defense and foreign relations in the fields of Strategic Studies, Political Science and International Relations. Following an agreement signed with UFRGS in the wake of its constitution, NEE has partnered with NERINT, a research center linked to the university and established in 1999 as the first center to be exclusively dedicated to the study and research in International Relations in Southern Brazil. Since then, both institutions have been promoting research and joint activities aimed at strengthening links between advanced research centers in both the Armed Forces and Brazilian academic institutions.

Keywords: National Defense. International Security. Academy and Armed Forces. NERINT. NEE/CMS.

Resumen: Este artículo tiene como objetivo ofrecer un estudio de la cooperación entre el Núcleo Brasileño de Estrategia y Relaciones Internacionales (NERINT) de la Universidad Federal de Rio Grande do Sul (UFRGS) con el Núcleo de Estudios Estratégicos del Comando Militar del Sur (NEE/CMS) en el análisis de una percepción común sobre la seguridad, la defensa y las relaciones exteriores de Brasil en las áreas de Estudios Estratégicos, Ciencia Política y Relaciones Internacionales de la academia brasileña. A partir de un acuerdo formalizado con la UFRGS, desde 2016 el NEE mantiene asociación con el NERINT, núcleo de investigación vinculado a la UFRGS establecido en 1999 como el primer centro orientado exclusivamente al estudio y la investigación en Relaciones Internacionales en el Sur de Brasil. Desde entonces, ambas instituciones vienen compartiendo investigaciones y promoviendo actividades conjuntas, con la intención de obtener el estrechamiento de vínculos entre centros avanzados de investigación tanto de las Fuerzas Armadas como de las instituciones académicas brasileñas.

Palabras clave: Defensa Nacional. Seguridad Internacional. Academia y Fuerzas Armadas. NERINT. NEE/CMS.

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1 Introduction

This paper aims to analyze the cooperation between the Brazilian Center for Strategy and International Relations of the Federal University of Rio Grande do Sul (NERINT/UFRGS) and the Center for Strategic Studies of the Southern Military Command (NEE/CMS) in the construction of a common mentality about the security, defense and foreign relations in Brazil. To that end, we will use materials published by the two research centers, as well as documental research based on the cooperation files established between the Federal University of Rio Grande do Sul (UFRGS), the Center for International Government Studies (CEGOV), the Graduate Program in International Strategic Studies (PPGEEI) and between NERINT, the Southern Military Command (CMS) and NEE/CMS¹.

This paper is motivated by academic and social reasons: in the academic field, its importance is justified due to its interface and the dissemination of teaching and research activities; and from a social standpoint considering the importance of the activities themselves, which are part of a broader effort to explore the possibility of a Brazilian perspective on International Security and National Defense. The design of the survey was divided into three fundamental steps: (1) working meetings and gathering of information with the Center for Strategic Studies of the Southern Military Command; (2) presentation of the research and previous results in the International Defense and Security Agenda Working Group of the Brazilian Security and Defense Strategic Studies Seminars of 2018, which were simultaneously held from June 5th to June 8th of 2018 at the Federal University of Rio Grande do Sul and in the Southern Military Command; and (3) the presentation of the research and its final results in the Theory, Methodology and Institutionalization of Defense Studies: Education, Vocational Training and Research in Defense Panel at the 10th Meeting of the Brazilian Association of Defense Studies (ABED), held from September 3rd to September 5th of 2018 at the University of São Paulo.

Our main hypothesis points to the idea that a closer relationship between the academic field and the Armed Forces (which, together with the industry, make up the triple helix) contributes to the debate about the construction of a Grand Strategy for Brazil in the 21st century, which aims for a greater integration and autonomy of Brazil in the international scenario.

What we understand as ‘Grand Strategy’ is: a National Strategy defined by the synergy between the Military Strategy and other areas of National Power, directed to the preparation and implementation for the overcoming of obstacles, and the achieving and maintaining of national goals, in accordance with the guidelines established by the National Policy (BRASIL, 2007 *apud* MARTINS; NUNES, 2017, p. 191, our translation). Once the scope of the term is recognized, we establish that our proposal aims to approach the Grand Strategy as an idea and as an ongoing research line, not as a static concept.

The design of a Grand Strategy for Brazil, gathering diplomatic and defense policies, only became possible with the unfolding of a historical process of evolution in the relations between civilians and the military, especially within the academic environment.

1 The authors would like to thank the work team of Prof. Dr. José Miguel Quedi Martins, from the Department of Economics and International Relations at UFRGS, in particular the former students of International Relations Luana Isabelle Beal and Valeska Ferrazza Monteiro, for the provision of documents, minutes and official records of the collaboration agreements between UFRGS and the Southern Military Command.

1.1 Historical and theoretical aspects: the evolution of civil-military relations²

It was only after World War II that the studies on International Security began to acquire projection and solidity (along with the already existing studies on war and defense) making it so that the analysis were able to cover a wider range of aspects, including the presence of non-military threats. The high amount of human capital mobilized during World War II, as well as the new strategic challenges stemming from the advent of nuclear weapons, catalyzed the occurrence of a significant innovation in this period: the greater engagement of civilians in the studies of International Security and Defense, and their collaboration to the military authorities and governmental organizations (BUZAN; HANSEN, 2012). Such an expansion of scholars dedicated to the area entailed a significant increase in the production of knowledge concerning security and defense policies.

This phenomenon credits the 1950s and 1960s as the “Golden Years” of International Security Studies (FREEDMAN, 1998). During the period, Western governments began to recruit civilian strategists from academic institutions to develop conceptual innovations and high-level research to be used by the high-ranking state bureaucracy. It was not unusual for these scholars to be accepted and incorporated into the public services, thus exercising a more active role in the decision-making process regarding security policies (WILLIAMS, 2008). In parallel, the field of Strategic Studies also underwent a remarkable expansion: during the second half of the 20th century, the concepts of Grand Strategy and Total Strategy were invented, seeking a more targeted approach than that proposed by the traditional studies regarding security – as well as analyses in the military, naval, air and aerospace, industrial, and operational levels, among others. (PROENÇA; DUARTE, 2007).

In short, this new way of approaching security policies post-World War II has provided the opportunity for a rapprochement between academics, strategists, civilians and military personnel, and the state. In this regard, the relationship between the state and the Armed Forces is fundamental, considering that one of the main focuses of the civil-military affairs is precisely the relationship between military personnel and the state: the military personnel is the active pole of the military structure and is responsible for the society’s military security, while the state is the active pole for the formulation of society’s guidelines and is responsible for the allocation of resources in important fields, including military security (HUNTINGTON, 1957). Thus, “the integration between military institutions, government policy-makers and the rest of society represents the focus on civil-military relations and the basis of democracy” (LOVEMAN, 1999 apud FERREIRA, 2018, p. 6, our translation).

The goal of any National Defense policy is to formally ensure the security of a nation’s social, political and economic institutions against threats that may arise from other independent states or actors of the international system. Civil-military relations, therefore, correspond to a

² Segments of this subsection have been previously presented and made available at the XIV Congresso Acadêmico sobre Defesa Nacional under the following reference: Thudium *et al.*, (2017).

fundamental aspect of a national defense policy, being the main institutional component in the elaboration of military security policies (HUNTINGTON, 1957).

It is important to note that studies on International Security and National Defense have an essentially Anglo-Saxon nature, due to the rapprochement between military personnel and civilians in Western countries during the postwar period. The Western formula, however, says that there cannot be development without investment in research and Defense, and these two poles (academic knowledge and the Armed Forces) need to be interconnected. Similar to Western countries in the postwar period, Brazil seems to be experiencing, in its own time, a more elaborate and fruitful relationship between the military and the academic environment – one that has the potential to foster the emergence of national approaches to the topic, which are extremely necessary.

The case study presented here seeks to address an example of this approach and a reflection of the evolution of the civil-military relationship in Brazil, the unprecedented partnership that has been developed between the academic environment and the military environment in the state of Rio Grande do Sul stemming from a cooperation agreement between the Federal University of Rio Grande do Sul (UFRGS) and the Southern Military Command (CMS), which allowed for the development of joint activities between the Brazilian Center for Strategy and International Relations (NERINT) of UFRGS and the Center for Strategic Studies of the Southern Military Command (NEE/CMS), among other institutions involved. This is an extremely relevant process for the construction of a common mentality of International Security and National Defense in Brazil.

2 THE BRAZILIAN CENTER FOR STRATEGY AND INTERNATIONAL RELATIONS

NERINT – The Brazilian Center for Strategy and International Relations — is currently collaborating closely with international security scholars both in academic and military centers in Brazil. The Armed Forces, in turn, have been seeking an intense dialogue with the academic field and with society in general, which can be observed through the cooperation efforts developed in southern Brazil. NERINT represents the consolidation of the joint encouragement efforts for the production of studies and research in International Relations at the Federal University of Rio Grande do Sul (UFRGS), a Higher Education Institution (HEI) of excellence³, and is the first research center to be created for this end (in August of 1999). NERINT's inception brought together professors and researchers from various areas and departments, especially those linked to the Institute of Philosophy and Human Sciences (IFCH) of the university.

In this way, advanced research developed by NERINT sought to rescue the historical dimension of international affairs, which is traditionally neglected in contemporary international relations analyses and in Security and Defense studies. Such a rescue also represents a theoretical issue, since international relations, defense matters, and the areas dominated by political science

3 The Federal University of Rio Grande do Sul (UFRGS) ranked first among the federal universities in the general course Index (IGC) of 2016, published in November of 2017 by the Ministry of Education (MEC). With a score of 4.29 on a scale ranging from 1 to 5, UFRGS reached the highest score of IGC-5 (UFRGS..., 2017).

have consistently been presented as fields of study marked by instrumental theorizations (VISENTINI, 2016).

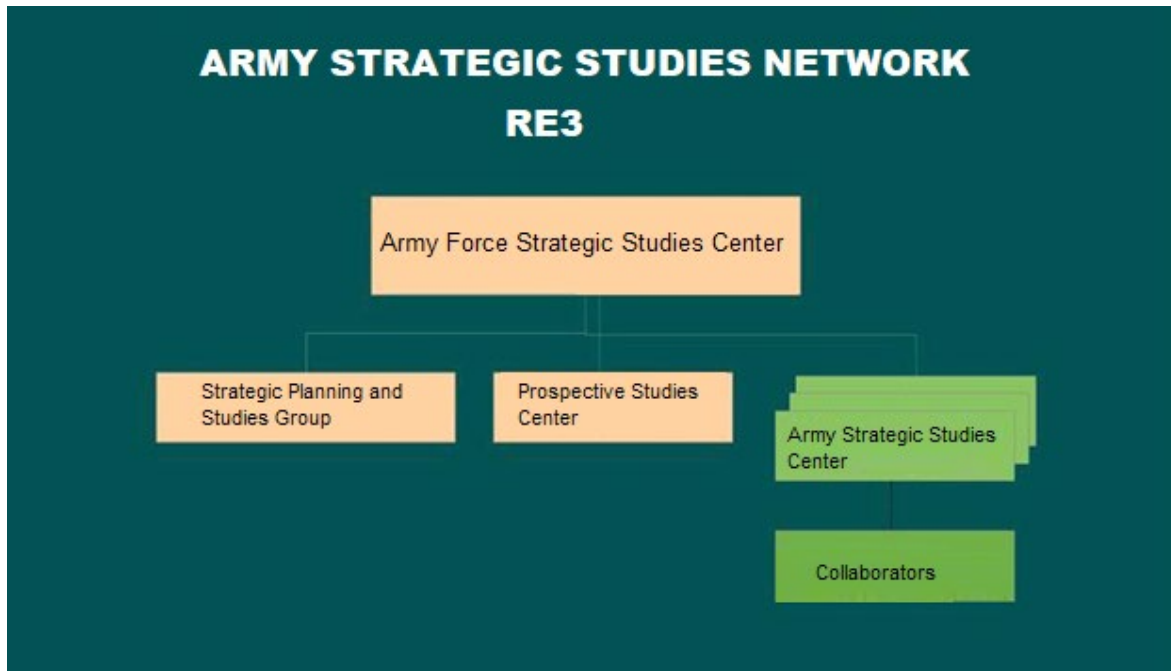
NERINT was originally established in a partnership with the university's Latin American Institute for Advanced Studies (ILEA), whose purpose is to support teaching, research and extension programs and projects, giving priority to proposals that involve inter-institutional collaboration of multidisciplinary nature (UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL, 2018a). The exploratory studies that were developed by NERINT, especially those regarding emerging countries, have experienced remarkable expansion since the threshold of the 21st century, as they accompanied the political-diplomatic and economic-social development of Southern countries — or the 'Geopolitical South'. Within a framework of increased importance of international affairs in the Brazilian political and economic agenda, NERINT acted as an ambassador for the implementation of an undergraduate course in International Relations in 2004, and of a graduate program in International Strategic Studies (PPGEEI) in 2010, both within the framework of UFRGS. Consequently, many researchers linked to NERINT also became part of the University's Faculty in the Department of Economics and International Relations. Since 2018, NERINT has been partnered with the Center for International Studies on Government (CEGOV), a multidisciplinary research center dedicated to public policies in the international area and linked to the institution's Dean's Office.

The cooperation between state, corporate, academic and social institutions was also intensified by NERINT, as well as the direct contact with Latin American, African and Asian centers, which were added to the already existing contacts with Europe and North America. It was within this framework that NERINT began to work more closely with the military. Therefore, since 2016 NERINT has been acting as a partner of the Center for Strategic Studies of the Southern Military Command (NEE/CMS).

3 THE CENTER FOR STRATEGIC STUDIES OF THE SOUTHERN MILITARY COMMAND AND THE RAPPROCHEMENT OF THE MILITARY WITH THE ACADEMIC WORLD

The Network of Strategic Studies of the Brazilian Army (R3E), which aims to promote greater participation of the academic and civil areas in defense debates, was established in 2013. Ever since its inception, the R3E has partnered with public bodies, research centers and national and international Higher Education Institutions (HEI) to hold seminars, lectures and courses on strategic defense issues (BRASIL, 2016). In addition, the network operates in the dissemination of knowledge and of activities produced by the Army, and the integration of researchers in discussions regarding the strategic planning of the Armed Forces, promoting an exchange of ideas and views that contribute to the production of knowledge in National Defense and to the development of a culture of defense in Brazil (BRASIL, 2016).

The network is made up of the Army Forces Strategic Studies Center (CEEEEx), the Army Strategic Planning and Studies Group (GEPEEx) and the Army Strategic Studies Center (NEE) and their collaborators, as shown in Figure 1:

Figure 1 - Army Strategic Studies Network (RE3)

Source: Brasil ([201 -])

The Army Forces Strategic Studies Center (CEEEEx) precedes the formalization of the R3E, having been created a decade earlier, in 2003, as a subordinate organ to the general staff of the Army that aims to study and propose military policies and (non-operational) strategies, as well as to monitor and evaluate, at a national level, policies and strategies that are linked to the interests of the Force (BRASIL, 2016). The work produced by the Center serves to subsidize the Army Strategic Planning System (SIPLEx) and the internal planning of the General Board (ODG), the Operating Board (ODO) and the Sectoral Management Bodies (ODS). In addition, the Center is responsible for increasing the Brazilian Army's relationship with the academic community through the holding of seminars, participation in academic events and the promotion of publications approaching defense issues (BRASIL, 2016). Among the responsibilities and functions of the Army Force Strategic Studies Center are:

- (1) To elaborate prospective studies in matters of National Defense, in order to identify possible situations that may require initiative on the part of the Brazilian Army in order to overcome difficulties and seize opportunities, aiming to guide the Army Strategic Planning System in the formulation of its goals and strategies;
- (2) To evaluate national and international circumstances and determine situations that may require Force initiative for overcoming conflicts and crises or fulfilling national defense interests;
- (3) To study and propose policies and strategies that go beyond the operational level, as well as monitoring and evaluating (on a national and international level) policies and strategies that may be of interest to the Institution;
- (4) To advise the Ground Force Command and Control Center (CC2 FTer);

- (5) To promote and participate in meetings, seminars, panels and similar events, with political, judicial, academic, corporate, and other segments, with the intention of encouraging society to reflect on the importance of National Defense issues at the political-strategic level;
- (6) To coordinate the work of the various Advisory Councils and Centers of Strategic Studies - existing or to be created within the framework of the Force -, through an engineering service channel to be established, in order to standardize procedures, studies and activities relating to the subject, so as to avoid the dispersion of efforts and resources;
- (7) To maintain contact with entities similar to the Ministry of Defense, other armed forces, and other public or private entities. (BRASIL, 2016, our translation).

The Army Strategic Studies Network is composed by different partners within the university, such as, for example, the Federal University of Rio Grande do Sul (UFRGS), the University of Brasilia (UnB), The Federal Fluminense University (UFF) and the São Paulo State University (UNESP); military institutes, such as the Meira Mattos Institute (IMM) of the Brazilian Army Command and General-Staff College (ECEME), and the Pandiá Calógeras Institute (IPC)⁴ of the Ministry of Defense; national and international research centers and *think tanks*, such as the Brazilian Center for International Relations (CEBRI) and the *International Institute for Strategic Studies* (IISS); and academic-civil societies such as the Brazilian Association of Defense Studies (ABED). The Network's institutional collaboration projects are operationalized, for the most part, by Strategic Studies Centers established in the Military Commands and Army Divisions, organs which are directly subordinate to the Army Strategic Studies Center. On October 20th of 2015, the Strategic Studies Center of the Southern Military Command (NEE/CMS) was activated, based in Porto Alegre, Rio Grande do Sul. The Southern Military Command (CMS) has the mission of maintaining sovereignty in the southern region of Brazil, which covers the states of Paraná, Santa Catarina and Rio Grande do Sul. For this purpose, it has 50,000 military officers, that is, a quarter of the Brazilian Army's personnel, 75% of the mechanized resources available in the ground force, 18 general officers and 160 Military Organizations (CMS, 2018).

Ever since 2014, the Center for International Studies on Government (CEGOV), an interdisciplinary center linked to the UFRGS' Dean's Office, and of which NERINT is part, has launched a rapprochement with the Southern Military Command through working meetings and technical missions in Santa Maria. In May of 2015, the EME 1303500 Memorandum of Understanding was signed, which formalized the cooperation between the Southern Military

4 "The Pandiá Calógeras Institute (IPC) is a direct and immediate assistance body to the State Minister of Defense. Its mission is to provide a portfolio with precise, useful and timely strategic advice in the Defense Area, based on Higher Level Studies and broad academic, institutional and social participation. The IPC operates through different means, including the production of analyses, the promotion of dialogue between the Ministry of Defense and the academic area, and the stimulation of knowledge production on topics of interest to the National Defense. Thus, the Institute permanently contributes to the enhancement of the civil-military relationship. The IPC works on several fronts, on its own initiative or in cooperation with similar institutions and national and international *think tanks*. Its activities include: promotion and participation in events that collaborate to create an authentic development of thought on Brazilian Defense; stimulus to the integration with civil and military education institutions; and the establishment and maintenance of a documentation center to subsidize research projects and promote the exchange of information and analyses in the field of national defense. The Institute is named after the engineer and politician João Pandiá Calógeras, the first civilian to hold the post of Minister of War in Republican history during the Government of Epitácio Pessoa. In his term, Pandiá Calógeras undertook an important process of modernization, expansion and improvement of the Army. At the same time, he left a remarkable legacy as a writer, academic, and researcher, thus personalizing civilian-military rapprochement, always with a mind to the interests of the state. Civilian-military cooperation was pioneered in the beginning of Brazilian Republicanism, and has now become crucial for the consolidation of the defense sector in the country." (BRASIL, 2018a, our translation).

Command and the Federal University of Rio Grande do Sul. Six areas of cooperation were defined: (1) Santa Maria Rationalization Program (PRORASAM); (2) The Impact Studies in the Santa Maria Region; (3) Applied Research on models and organizational systems based on simulation platforms with a large number of agents; (4) The International Relations and Defense distance learning course; (5) the creation of a Strategic Management Center; and (6) The Supply Chain and Environmental Management of the PQ-R-MNT/3.

With the establishing of the Strategic Studies Center in October of 2015, many of the partnership’s activities became operational through the agency. This allowed for the maintenance and expansion of partnerships with the academic environment, in particular with the Federal University of Rio Grande do Sul, and with Defense Industries, through the Committee of the Defense and Security Industries of Rio Grande do Sul (COMDEFESA) and with the other Armed Forces, for the leveling and integration of knowledge, and the provision and strengthening of the civilian-military relationship (UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL, 2016).

Within the framework of the Southern Military Command, NEE/CMS promotes an interaction between public and private bodies, Higher Education Institutions (IES), public and private research institutes, associations, researchers, and national and international *think tanks* aimed at the production and dissemination of knowledge on National Defense (BRASIL, [201-]). In addition, NEE/CMS has the duty of encouraging the creation of centers of strategic studies in its area of influence, as well as articulating members of its network of collaborators through the promotion of seminars, meetings, the signing of agreements, and the production of papers and books approaching the Army’s thematic areas of interest (BRASIL, [201-]). The strategic themes of interest that are approached by the NEE/CMS are divided into seven main axes, as shown in Table 1:

Table 1 - Strategic Themes

Events	Main Themes
International reactions to Brazilian protagonism	Geopolitics
Strengthening of South America’s integration	
Increase in international pressure regarding the Amazon Forest	
Increase in international interest on strategic areas of Brazil	
Growth and security of the Brazilian Army’s budget flow	Public Management
Adequacy of the infrastructure necessary for meeting defense demands	
Strengthening of the defense industry in Brazil	
Increase in investments on science and technology	
Increase in the complexity of Brazilian public security	Social tensions
Increase in influence by non-governmental actors	
Increase in social tensions	
Occurrence of terrorist activity in the Brazilian territory	Terrorism
Occurrence of cyber attacks in the Brazillian territory	Cyber Defense
Worsening of the environmental issues	Environment
Development of a defense mentality in Brazil	Defense Mentality

Source: Brasil ([201 -])

As a result of this approach, on May 4th of 2016 the Cooperation Agreement EME 1505400 between the Board of Higher Military Education and the Federal University of Rio Grande do Sul was officially recognized by the Official Gazette of the Union, with the objective of developing an exchange program for scientific and technical cooperation between the Brazilian Army Command and General-Staff College (ECEME), CEGOV, and the Graduate Program in International and Strategic Studies (PPGEEI) in the areas of Teaching, Research and Extension. Also in 2016, NERINT, as a research center linked to UFRGS and PPGEEI, announced its collaboration with NEE/CMS.

Currently, as of January 2018, NEE/CMS has several partnerships with the Federal University of Rio Grande do Sul (UFRGS), including the aforementioned Graduate Program in International and Strategic Studies and the Brazilian Center for Strategy and International Relations; in addition to partnerships with the Federal University of Santa Maria (UFSM), the Santa Maria Development Agency (ADEMS); and the South American Institute for Policy and Strategy (ISAPE). The NEE/CMS is composed of three Cavalry Colonels – one chief and two analysts – and three military auxiliaries. The NEE/CMS also relies on researchers from its partner institutions.

One of the main projects arising from the partnership between UFRGS and the CMS, carried out through NERINT and NEE/CMS in partnership with ISAPE and the International Relations Student Center (CERI) of UFRGS, and promoted by PPGEEI and CEGOV, was the organization of the Strategic Studies Seminars. The Seminars were proposed to foster integration between academic knowledge and Defense and Armed Forces Industries for the development of a defense mentality, with a view to the social and economic development of Brazil and greater insertion of the country in the international scenario (UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL, 2016). In the year of 2016, the Brazilian seminar of International Strategic Studies of the PPGEEI/UFRGS⁵ was organized simultaneously with the newly inaugurated Seminar of Strategic Studies of the Southern Military Command and the CEGOV Union Houses Seminar, giving rise to a simultaneous and unprecedented event in the National academic-military environment.

In June of 2018 the event was held again under the unified thematic axis “National Issues and the Defense Agenda”. This thematic axis aimed to highlight the importance of Defense studies in Brazil as an instrument to promote national development and to obtain better international insertion (UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL, 2016).

The project counts with the support of the Ministry of Defense, the general staffs of the Army, Navy and Air Force, the Ground Operations Command, the Department of Science and Technology of the Army, the Defense and Security Industries of Rio Grande do Sul Committee (CIERGS/FIERGS), the UFRGS’ Pro-Rector of Extension and Pro-Rector of Graduation Courses, AEL Systems, among others. Among the authorities involved in the last edition of the

5 The first edition of SEBREEI was held between June 20th and June 22nd of 2012 and approached the theme ‘Regional Integration and South-South Cooperation in the 21st century. SEBREEI’s second edition took place between May 21st and May 23rd of 2013 and its theme was ‘The South Atlantic as an International Insertion Axis for Brazil’. The 3rd edition of SEBREEI was held between October 18th and October 21st of 2016, in conjunction with the 1st Seminar on Strategic Studies of the Southern Military Command and the 4th Union Houses Seminar, together they made up the Strategic Studies Seminars of 2016 (UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL, 2016).

event were the Academic Coordinator, Prof. Dr. Paulo Gilberto Fagundes Visentini, NERINT's Coordinator; the Institutional Coordinator, Col. Cav. Mário Giussepp Santezzi Bertotelli Andreuzza, Head of NEE/CMS; and the leader of the Organizing Committee and creator of the event, Prof. Dr. José Miguel Quedi Martins. The presence of UFRGS' Dean Rui Vicente Oppermann, the Southern Military Army General Commander Geraldo Antônio Miotto, and the head of the Strategic Studies Center of the Army, Art. Col. Valério Luiz Lange were also noteworthy – among other renowned academics and high-ranking officers of the Army, Navy and Aeronautics.

The strengthening of the relations of the military segment with the academic environment, through seminars, joint works and information exchange serves the purpose of “(...) keeping the academia updated regarding the conditions of employment of the troops and the difficulties faced. This as a way of maintaining the institutional strength of civil organizations and allowing the troops to be supervised” (JANOWITZ, 1971 *apud* FERREIRA, 2018, p.9).

Another project spearheaded by the rapprochement between the Southern Military Command and the Federal University of Rio Grande do Sul was the creation, in the year of 2016, of a Special Selection Public Notice for military personnel in the International Strategic Studies Graduate Program at UFRGS. Based on the Memorandum of Understanding between the institutions, which sought mutual cooperation in research, technological innovation and the training of human resources, the Public Notices are intended to encourage *avant-garde* knowledge production in the context of International and Strategic Studies and Military Science through the fostering of high quality and impactful research, the developing of studies and research in International and Strategic Studies that can contribute to the formulation of state policies in various aspects involving Security and National Defense, and the developing of skills associated with transmission of knowledge, in particular the publication of scientific papers and the promotion of teaching activities (UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL, 2017).

In the year of 2017, within the scope of the cooperation axes established two years earlier, CEGOV offered a distance learning specialization course in International Relations: Geopolitics and Defense, bringing together civilian and military students from several states of Brazil. The reciprocal sharing of academic and military publications in the NERINT and NEE/CMS digital platforms was also intensified with emphasis on the publication “Austral: Brazilian Journal of Strategy and International Relations”, NERINT's Research Bulletin, the Brazilian Journal of African Studies (edited by CEBRAFRICA, a research center associated with NERINT), and the NEE Library.

Finally, on December 28th of 2018, as another result of this fruitful rapprochement, a Memorandum of Understanding was signed between the Brazilian Army's Department of Science and Technology (DCT) and the Federal University of Rio Grande do Sul (UFRGS). The partnership instrument aimed to develop and strengthen cooperation in the fields of Science, Technology and Innovation in scientific research and in the exchange and training of technical and human resources, seeking to improve the National Defense Strategy, meet the common interests of the participants and the interest of the Program of Transformation of the Army's Science and Technology System (PTSCTE_x) (BRASIL, 2018b).

All these efforts and projects have pointed to an intensification of the activities of research and joint strategic development between the Armed Forces and the academic sector, a critical factor

to the production of knowledge, and unified policies with the potential to contribute to the social and economic development of Brazil and for the construction of a Grand Strategy in the 21st century which may grant greater integration and autonomy to the country in the international scenario.

4 DISCUSSING A GRAND STRATEGY FOR BRAZIL IN THE TWENTY-FIRST CENTURY⁶

Brazil must continue to combine efforts to create a long-term Grand Strategy that brings two complementary policies together: diplomacy and defense. In this sense, Brazil's Grand Strategy must articulate the planning sectors of politics, economy and security, guided by the permanent principles and objectives of sovereignty, citizenship and regional integration (MARTINS; NUNES, 2017). Within this framework, diplomatic policy must be responsible for the peaceful resolution of conflicts, a central feature to Brazil's political integration. In turn, defense policy should seek to introduce the matter of Brazil's deterrence capacity as a central pillar for its international diplomatic projection. In the strictly domestic field, a development strategy for the National Defense Industrial Base (IDB) is also fundamental, in order to strengthen the relationship with the economic sector.

In this sense, the Brazilian Center for Strategy and International Relations (NERINT) has a research line dedicated to tracing ideas for a Grand Strategy for Brazil in the 21st century - being the partnership with the Center for Strategic Studies of the Southern Military Command (NEE/CMS) a part of this line of research. NERINT seeks to promote efforts in three different fields in order to promote Brazil's international insertion: (1) Foreign Policy and Defense; (2) South American Strategic Partnerships; and (3) South-South cooperation (UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL, 2018b).

The first aspect of this approach concerns Brazil's Foreign and Defense Policy. At an international level, one can observe a transition from unipolarity to a new configuration that is still undefined. In light of this, Brazil must expand its autonomous activities through several strategic bilateral and variable geometry partnerships in order to broaden its range of strategic options in an uncertain scenario of power transition. In short, there are several paths to be taken by Brazil at the multilateral level, whether in economic and commercial negotiations or security arrangements.

Due to its geographical and historical characteristics and the intense competition between major global capitalist centers, the challenge of South America's integration is central to Brazil's long-term strategy. In this sense, the second theme proposes the examining of the economic political and security opportunities and challenges in the South American strategic environment. From an integration and cooperation standpoint, two projects may be highlighted: the UNASUR and the South American Defense Council (CDS), both of these projects, in spite of the recent crisis, promoted an institutional framework that proved important to the development of diplomatic and defense policies in Brazil; the MERCOSUR, by its turn, is important not only for the integration of markets, but mainly for the joint development of its members, so as to enable

⁶ With the contribution of Erik Herejk Ribeiro.

the creation of regional productive chains. On the other hand, there are historical tensions and rivalries in the region, combined with internal political instability and “non-traditional” threats.

The third thematic field is centered around South-South cooperation. Apart from the immediate surroundings of Brazil, it is necessary to observe and formulate policies for countries in similar condition in the international system and with complementary interests in areas such as policy, economy, defense, technology and culture. The African continent, due to its historical ties with Brazil and its geopolitical importance, is a preferential region for partnerships. African studies have also been rapidly developing in Brazil, stimulated by Brazil’s growing strategic presence in Africa and the process of modernization of the countries that make up the African continent. In addition, Brazil’s Defense Policy considers as part of its strategic geopolitical environment not only the South American regional environment, but also the South Atlantic and the West African coast. Combined with this perspective, it is essential to analyze the Brazilian projection and its cooperation efforts with African countries (including in defense), a goal that is shared by NERINT⁷ and by the Armed Forces (VISENTINI; MIGON; PEREIRA, 2016).

Finally, the participation of Brazil in the Asian continent (which covers the Middle East) is also essential for the recognition of the global role to be played by the country, in view of the centrality of Asia in the geopolitical framework of the 21st century. The rise of China as a new major productive-technological hub raises new business and investment strategies for Brazil.

For the former Ministry of Defense (2011-2015) and Foreign Affairs (1993-1994 and 2003-2010), Celso Amorim (2015), Brazil must adopt a Grand Strategy that gathers foreign policy and defense policy, in which diplomacy must be the main instrument and the first line of defense of Brazilian interests, always supported by defense policy. In other words, what Amorim (2015) proposes is that the Brazilian state’s *soft power*, as theorized by Joseph Nye (2004), expressed in the ability to cooperate in a mutually beneficial manner with other countries, should be strengthened by the country’s *hard power*, capable of deterring threats and collaborating with our neighbors and partners, in the area of defense.

One of the main assumptions of Brazil’s Grand Strategy for the 21st century, which combines robust power and soft power, is a reasonable balance of world power (AMORIM, 2015). In this sense, Brazil has established as one of the pillars of its Grand Strategy the distribution of power within the international system in a multipolar world, ensuring greater autonomy to its national process of development, going back to the construction of an agenda of multi-stakeholder cooperation and the coordination of meetings with international bodies of economic-financial and, especially, political governance:

⁷ In 2005, NERINT established, through an agreement with the Alexandre Gusmão Foundation (FUNAG) of the Brazilian Ministry of Foreign Affairs (MRE), the Center for Brazilian-South African Studies (CESUL). With the remarkable development of African studies in Brazil, NERINT and CESUL established an independent center focused on the study and research of the African Continent’s International Relations: The Brazilian Center of African Studies (CEBRAFRICA), whose activities are developed in partnership with NERINT and CEGOV at UFRGS.

The multi-polarity goal was sought by Brazil on different fronts, with the highest priority given to the integration of South America; the claim for the democratization of the United Nations decision-making bodies; the search for greater justice in trade negotiations [...]; and the articulation with new partners in the developing world [...]. Needless to say that economic, cultural and human motivations were also present in these efforts, on varying degrees. Multi-polarity, based on multilaterally accepted standards, offers the most favorable conditions for Brazil to independently define its interests and carry out a grand strategy that includes not only the dimension of a peaceful country, but the dimension of a peace-providing country. (AMORIM, 2015, p. 16, our translation).

In this way, Amorim defended the need for discussing a Grand Strategy for the 21st century that is authentically Brazilian and the result of cooperation between civil and military societies:

We have to think about our role in the world without complexes and with autonomy. The conception of an authentically Brazilian *Grand Strategy* – involving foreign policy and defense policy – must be the result of a broad public dialogue about our challenges and priorities, which involves the political, diplomatic and military fields, and the participation of universities, the media, the productive sectors (entrepreneurs and workers) and society in general. The publication of the White Paper on Defense, on 2013, and of the revised editions of the National Defense Policy and the National Defense Strategy should all be considered part of this dialogue. (AMORIM, 2015, p. 11, our translation).

Cooperation between academic and military bodies is particularly relevant to this debate. Thus, the professionalization of the Armed Forces, as defended by Huntington (1957), should also be extended to civilians, seeking to create opportunities for civilians and military personnel to work in an integrated manner addressing these issues (YOUNG, 2006 *apud* FERREIRA, 2018, p. 8, our translation).

5 FINAL CONSIDERATIONS

In light of the undefined characteristics of the post-Cold War international system, it becomes necessary for Brazil to make an effort in creating a long-term Grand Strategy, bringing together two complementary policies and spheres: diplomacy and defense, and the civil and military environments — or the soldier and the diplomat, to quote Raymond Aron (2002), and the soldier and the state, to quote Samuel Huntington (1957). To this end, it is necessary to have synergy and coordination between social sectors and national institutions in order to maximize the diplomatic, economic, technological, political and security potential of Brazil's international integration.

The rapprochement between the Brazilian Center for Strategy and International Relations (NERINT), and the Center for Strategic Studies of the Southern Military Command (NEE/CMS) represents an important process towards this goal, with the potential of building

intelligence tools that allow for the classifying and sorting of the knowledge for the elaboration of common guidelines for Defense and National Development matters. It also represents the effective operationalization of guidelines already foreseen in the White Paper on defense, in the National Defense Policy and in the National Defense Strategy. In essentially practical terms, there is great potential for reproduction of the model of partnership developed between NERINT/UFRGS and NEE/CMS that has gone almost unexploited at the national level (in other states of the federation and in other military commands). Therefore, this paper represents a contribution to the field (in the form of a case study), and can – and should – be complemented by other similar initiatives.

After a long period of peace, the Brazilian population lacks perception of the country's defense threats, in spite of the efforts of the universities, the industries, and the institutions and agencies related to Defense and International Relations (UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL, 2016). It should also be pointed out that the process of re-democratization has given rise to a general disregard for defense issues and civilian ignorance about the military field. In order to protect its population and its heritage, as well as to have the freedom to pursue its legitimate interests, Brazil needs to confront the antagonisms that endanger its national objectives (UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL, 2016).

With that in mind, defense matters must be thought of not only considering a military (armed) instrument, since this is only a specific instrument of defense, just as the diplomat is only a specific instrument of diplomacy. In the same way, academic contributions and the governmental bureaucracy should not be restricted to the field of defense alone, since a Grand Strategy is composed of several crosscutting themes, in which defense is only one of its political spheres. It is, therefore, necessary to foster a cross-party debate regarding a Grand Strategy and a security policy, preferably with a mind to state policies in detriment of government policies.

Civil-military relations decisively improve and enrich this debate. As argued by the North American political scientist Samuel Huntington (1957), the nations that develop an adequately balanced civil-military relations standard have great advantage in the fields of Security and Defense, since they increase the probability of getting correct answers to operational questions regarding military policy; while the nations that fail to develop balanced civil-military relations tend to squander their resources and take uncalculated risks.

What the NERINT/UFRGS and NEE/CMS partnership achieved (through seminars and other activities) was a direct interaction between academic reflection and military activities. Mutual knowledge dispelled prejudices and contributed to the development of strategic thinking – and all of this was achieved during one of the most delicate moments of Brazilian political history.

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An analysis of the cyberspace securitization process*

Un análisis sobre el proceso de titulización del ciberespacio

Abstract: Cyberspace manifests itself as a new domain for power relations as different actors use it to pursue their interests. Because it is endowed with a deterritorializing logic - in which multiple entities can act anonymously - cyberspace defies traditional conceptions of national security and defense, as digital flows cross different territories. Considering the insertion of the basic state infrastructure in the cyber domain, encompassing banking, telecommunications, transport and military systems, there is a growing dependence of society on cyberspace. Such dependency can be exploited by a myriad of international actors. In this context, through the conception of the Copenhagen School regarding the process of recognition of threats by securitizing agents, this article investigates the process of securitization of cyberspace by analyzing the white defense books of Brazil, Germany and France.

Keywords: Cyberspace. Safety. Defense. Territory. Threats.

Resumen: El ciberespacio se manifiesta como nuevo dominio para las relaciones de poder en la medida que distintos actores lo utilizan para perseguir sus intereses. Por ser dotado de una lógica de desterritorialización (pérdida de territorio) – en la cual múltiples órganos pueden actuar de manera anónima –, el ciberespacio desafía concepciones tradicionales de seguridad y defensa nacional, mientras que flujos digitales cruzan distintos territorios. Es considerada la inserción de la infraestructura básica de un Estado en el dominio cibernético, englobando sistemas bancarios, de telecomunicaciones, transportes y diversos agentes, como los militares, se observa una creciente dependencia de la sociedad con respecto al ciberespacio. Tal dependencia puede ser explotada por una miríada de actores internacionales. En ese contexto, por intermedio de la concepción de la Escuela de Copenhague con respecto del proceso de reconocimiento de amenazas por agentes de titulización, el presente artículo investiga el proceso de titulización del ciberespacio mediante análisis de los libros blancos de defensa de Brasil, Alemania y Francia.

Palabras Clave: Ciberespacio. Seguridad. Defensa. Territorio. Amenazas.

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1 Introduction

Cyberspace represents a new domain of power relations. Being partly dissociated from physical space, cyberspace has a logic of its own in which the traditional conception of borders hardly prevents the flow of information. As a new operating environment, cyberspace integrates private, military, civil and state actions into the technical-scientific-information environment. While cyberspace is consolidated as an alternative domain for the exercise of power relations, its logic and peculiarities pose challenges to traditional domains.

Shrinking physical distances, instantaneous communication and society's greater interdependence in relation to cyberspace raise questions on how to address defense and strategy in this new domain. Prominent among them are issues of securitization and the nature of potential "new" threats.

In this new environment – marked by more flexible borders and territories and multiple, anonymous actors – new and old threats challenge traditional conceptions of national security and defense. The frequency of cyber occurrences worldwide is well known. Malware,¹ ransomware² and DDoS³ attacks, among others, besides expanding the number of possible aggressors to non-state actors, have become increasingly sophisticated, making it difficult to identify the authors or motivations behind them. Given this scenario of insecurity, cyberspace may be interpreted as a domain for the exercise of power, alongside the domains of land, sea, air and space.

The goal of this research is to investigate the process of cyberspace securitization in Brazil, Germany and France by means of a comparative analysis of their respective Defense White Papers. Studying the defense papers of the selected countries makes it possible to highlight the threats, strategies and practices that compose the cyberspace securitization process of states that have been targeted by cyberspace espionage and monitoring (BRIDI; GREENWALD, 2013; WIKILEAKS, 2015).

Due to limitations, this study will analyze the documents *White Paper on German Security Policy and the Future of the Bundeswehr*, *French White Paper: Defense and National Security* and *White Paper on Brazilian National Defense*, the latter together with its most recent version, the 2016 draft. The analysis was limited to the countries' Defense White Papers, since they represent the highest level of defense documents, setting the tone and approach of the documents that follow them hierarchically.

The content analysis of said documents shall be guided by four main questions: i) Does the document include a clear definition of cyber security?; ii) What does the document say about the cyber sector?; iii) What threats are considered?; and iv) What is the stance regarding

1 The most common types of malware or malicious software are viruses or worms, which have the ability to cause damage and self-replicate in computer networks and systems (GOLDANI, 2005).

2 A lucrative kind of malware that renders data stored in computers inaccessible through encryption, requiring users to pay ransom to retrieve them (SYMANTEC, 2016).

3 An attack technique involving a large number of computers – of which the owner may or not be aware – which overloads websites or servers by sending repeated service requests, making the system inaccessible (CARREIRO, 2012).

the involvement of other civil sectors? The study will also perform a comparative analysis of the defense white papers regarding aspects that deal with new and traditional threats related to the cyber issue and key terms that contribute to the understanding of the relevance of the proposed subjects. This will be done by creating comparative tables and word clouds that express the tone and the most prominent terms in each document.

With the insertion of today's society in cyberspace, actors use it to project power and interests. The deterritorialization character inherent in the cyber domain enables, for example, terrorist groups to recruit dissidents; intelligence agencies to monitor communications; and social movement activists to coordinate their demonstrations.

Cyberspace basically emerges as an alternative space in parallel with the traditional domains of land, air and sea; however, cyberspace has no borders, airspace or territorial waters (HILDEBRANDT, 2013). Operating in cyberspace requires no armored vehicles, jet fighters or battleships, just internet access. Thus, the spread of power inherent in cyberspace provides private actors with an operational domain in parallel with state forces (NYE, 2012). Cyberspace therefore takes on a strategic value for states and may also represent a new environment for non-state threats.

The increasing relevance of cybernetics in the context of security and defense justifies this study's goal of analyzing the process of cyberspace securitization as a strategic domain by regional powers. However, prior to the analysis of this process in Brazil, Germany and France, a few concepts and definitions should be presented to better contextualize the subject.

2 Cyberspace: contextualization, concepts and definitions

Cyberspace has various definitions – some more comprehensive than others – which contribute to the existence of a wide spectrum of approaches and understandings (KUEHL, 2009). Some consider it from a more theoretical viewpoint as a new area of interaction that pervades and interconnects telecommunications into a large global network, while others consider the physical and malleable aspects of the different connections and interconnected devices.

Lobato and Kenkel (2015, p. 24-25) understand cyberspace broadly as “the worldwide interconnected information networks and communications infrastructure that spans the Internet, telecommunications networks, computer systems and the information they contain.” This definition proposes a broad approach to the concept of cyberspace as a large network of interconnected communications involving several actors connected to it.

Libicki (2009) offers a more specific definition, interpreting cyberspace as a less tangible medium than the traditional domains of land, air and sea. For the author, cyberspace is composed of three interconnected layers. The first is represented by hardware, physical electronic components such as cables, antennas and all kinds of interconnected devices, from computers and cell phones to armament systems, unmanned aerial vehicles (UAV) and so on. The second – or syntactic – layer consists of software. This contains the instructions and commands that developers and engineers give to the elements of the first layer so they may serve their purpose and communicate with each other. Last comes the semantic layer containing information in the form of binary data to be organized into lines of code or any other type of information.

In this context, cyberspace can be understood as a domain whose existence depends on the interconnectivity of information flows, in which are inserted all kinds of essential networks and infrastructure for today's society. Therefore, cybernetic space becomes a reality from the moment one or more devices are connected, serving as a platform for various human relationships. Because it includes different actors, cyberspace is a stage for unprecedented power relations. The latter generate different threats that interact, modify and exploit the information flows of the cyber domain.

In analyzing cyberspace, special attention should be given to three essential elements that represent peculiarities inherent in cyberspace and impose theoretical and practical challenges on social relationships. The first element is deterritorialization. Considering the physical elements of the hardware layer as devices that act in a similar way to knots in a large network of global communications, made up of information flows, such information flows are understood as corresponding to a reticular logic particular to cyberspace that interlinks the different physical devices interconnected by cyberspace. It is noteworthy that the traditional definitions and interpretations of territory understand it as the geographical area delimited by borders, corresponding to a spatially-based zonal logic, in which the state exercises sovereign control of the territory.⁴

The deterritorialization of cyberspace is present from the moment its reticular logic, in the form of interconnected flows, permeates the territory of different states; or when devices serving as nodes in the cyberspace network are controlled and/or exploited by other states. In other words, the interconnectivity of different points in a global network ends up permeating⁵ the boundaries, considered essential to the zonal logic on which the concept of territory is based.

The second element corresponds to the diffusion of power in cyberspace. As the cyber domain emerges as an alternative space for the exercise of power, the diversity of actors in the network, together with easy access and acquisition of equipment and means, enable a relative reduction in the differences of capability between militarily stronger states, fragile states, non-state organizations and/or individuals. In this context, the number of potential threats grows exponentially, since new players use cyberspace for both soft and hard power (NYE, 2012). Indeed, Marcos Guedes de Oliveira (2014), in addressing the untapped potential of cyberwarfare, warns of the possible consequences of the actions of individuals in cyberspace that may affect systems on which society depends. According to the author:

A brand new field of action is related to the facilitation of insurrections, demonstrations and even coups through the use and manipulation of resources shared via cell phone networks. Success in operations in this format would greatly reduce the costs of open and military intervention in smaller countries and give nations that dominate this

4 The concept of reticular and zonal logic is based on the analysis of network territory conceived by Haesbaert (2007), in which the different territorialities of groups and individuals merge with the territorial hegemony of states. The approach used here, however, uses the term in a sense more specific to cyberspace, considering the reticular logic of information flows within the cyberspace network that permeates the boundaries of the zonal conception of state territories.

5 This is a generalization. It is well known that countries such as China and North Korea have extensive restrictions on the use of their telecommunications and access to the global computer network.

technology a strong argument in favor of non-regulation of the cyber environment at international level (OLIVEIRA, 2014, p. 194-195, our translation).

The third particularity stems from the uncertainty that develops in the cyber domain. Kallberg and Cook (2017), in addressing the challenges of cyberspace for traditional military thought, point out that anonymity and the difficulty to gauge the impact of a cyberattack are elements that contribute to the prevalence of the uncertainty principle inherent in cyberspace. Given its interconnected and highly complex nature, a possible attack can hardly be quantified or measured, since the effects are not necessarily kinetic and/or immediate, and are often concealed beneath numerous layers of semantic and syntactic networks.

Anonymity, in turn, can be used as a tool of both protection and attack. This can result in an incorrect identification of a cyberattack, leading to a possible counter-attack against innocent people and an uncontrolled escalation of the conflict. The emergence of the new domain raises to a new level the notions of “defeating the enemy without fighting” and “having others fight your battles.”

The combination of deterritorialization, diffusion of power and uncertainty enables new and old threats to act in cyberspace within a scope ranging from diplomacy to sabotage, espionage, monitoring and even attacks with kinetic effects. Cyberspace is thus established as a stage for all kinds of actors and threats.

As an example, in 2013, Edward Snowden – a National Security Agency (NSA) analyst at the time – together with journalists from different countries revealed the NSA’s spying and monitoring program. Countries such as Brazil, Germany and France had heads of state, government officials and companies monitored by the US agency, with the help of allied countries belonging to the so-called “Five Eyes,” composed of security agencies of the US, Canada, Australia, New Zealand and the UK, which worked together to monitor citizens around the world (BRIDI; GREENWALD, 2013; WIKILEAKS, 2015; PRIVACY INTERNATIONAL, 2015).

Celso Amorim (2013, p. 289, our translation), prompted by spying in Brazil, spoke pertinently about the ever-finer line separating online espionage and cyberwarfare due to features such as uncertainty in cyberspace:

Data monitoring and cyberwarfare share the use of very high-tech tools for activities that result in serious breaches of sovereignty. When the purpose of monitoring goes beyond mere observation and aims at obtaining technological knowledge, the boundary between espionage and war becomes increasingly harder to define. Conceptually, there would be no difference, except perhaps with regard to immediate damage, between an act of espionage, of search for economic and technological information, and a traditional attack to obtain an economic resource.

Monitoring and cyberwarfare can target both countries perceived as hostile or representing immediate threats and friendly and allied countries. We already know that was the case in the data interception. We cannot exclude the same occurring with cyberattacks from any quarter. These two activities illustrate very clearly some of the new challenges of international security.

The monitoring exposed by Snowden is the exception to the rule, since the multiplicity of actors and anonymity in cyberspace makes the performance of national actors unlikely to be identified. However, it is possible to glimpse the performance of state actors in cyberspace, without confirmation or official recognition.

Perhaps one of the most emblematic examples is the Stuxnet case. This is a malware that contaminated the computers of Iranian nuclear centrifuges, sabotaging the country's nuclear project. All signs point to a cyberattack by the United States and Israel to delay that country's nuclear program. However, neither the Americans nor the Israelis ever actually accepted responsibility for the attack (KENNEY, 2015).

Monitoring or cyber sabotage carried out by other states constitute "old threats" in the sense that there has always been espionage, sabotage and wars between countries. However, they become "old threats" in cyberspace from the moment the diffusion of power forces them to act in parallel with other agents.

The new threats of cyberspace include not only those posed by states for the purposes mentioned above, but also threats by non-state actors. In other words, threats have crossed over from state level to the level of individuals. The latter have become capable, for example, of destabilizing governments by carrying out attacks with varied motivations. Non-state threats include cyber activism, cybercrime and cyberterrorism.

Cyber activism is defined as a cross of hacker action and political activism aimed at incapacitating servers or online websites (CEPIK; CANABARRO; BORNE, 2014). It can also be said that cyber activism is involved in issues related to certain causes, launching attacks against governments and companies that oppose their ideals to make them reassess their institutional decisions, thus drawing public attention to the defended cause (ZUCCARO, 2012).

Defined as an act or omission committed in violation of a law in cyberspace, cybercrime is a criminal activity related to illegal computer invasion, manipulation of information, sabotage of equipment and data theft (SAINI; RAO; PANDA, 2012). More broadly, it can be said that cybercrime is the development of illegal actions to be used in computer systems and networks. Using cyber espionage to test configurations and defense systems in order to gain access to sensitive information, cybercriminals can carry out cyber sabotage by generating obstacles by electronic means (CEPIK; CANABARRO; BORNE, 2014).

Despite not having a widely accepted definition – given the multiple meanings attributed to the word terrorism – (CHEN, 2014) cyberterrorism is generally interpreted as actions carried out by non-state actors against computer networks and systems, capable of resulting in violence against civilians. In addition, the attacks must have a political motivation and generate physical besides virtual damage (POLLIT, 1998; WEIMANN, 2005; KENNEY, 2015). According to Dorothy Denning (2000), cyber threats against computers, networks and systems aim to intimidate governments and populations in order to achieve social and political goals of groups and individuals. In addition, like the traditional form, cyberterrorism aims at widespread exposure and publicity (COLLIN, 1997).

Regardless of the motivation behind specific threats, cyberspace is revealed to be an environment in which different actions are carried out with variable levels of success. While bringing people together and allowing a range of previously unimaginable activities and services,

interconnectivity also opens doors to threats that were unthinkable in the recent past. Therefore, several states now recognize the importance of national cyber security and defense, since such attacks can generate irremediable physical, political, economic and social damage.

3 Cyberspace securitization

The post-Cold War global scenario led to the debate of new issues on the international agenda that became increasingly relevant in the 1990s, requiring the introduction of new models of security analysis (FARRET, 2014). Due to the inadequate theoretical-epistemological debate at the time, the analyses, previously focused on state-centered issues, were extended to non-state and individual actors, showing that the international system should not be analyzed solely from the viewpoint of interstate relations. Therefore, concepts previously considered immutable started being redefined (BUZAN; HANSEN, 2012).

Based on the premises of the constructivist strand, the Copenhagen School develops the theoretical concept of securitization. Perceiving the expansion of the field of international security, the School extends the concept of security beyond the political-military domain by introducing new sectors of analysis: economic, environmental and societal. To this end it analyzes discourses and security units to verify the securitization of a given topic.

Thanks to securitization theory, new forms of security analysis started being considered based on the discourse and stance of non-state and individual agents in the international system. That enhanced the perception and understanding of new international threats, previously linked mainly to the state (MOTTA, 2014). It allowed studies to be extended to the security of individuals and demonstrated cases of unbalance between state and society, such as when national minorities are threatened by the state itself or when the latter mobilizes society to face internal or external threats (BUZAN; HANSEN, 2012).

According to Grace Tanno (2003), security building processes start out from discourses by actors interested in establishing security agendas, and may thus undergo the securitization process. However, this process does not depend solely on securitization agents, for the proposal must be also socially acknowledged as a security threat. In other words, for a security situation to be created from discourse, the audience to which it is directed and who must provide the means required for the object to be securitized must voluntarily agree with the discourse, directing the act of securitization (AMARAL, 2008).

Therefore, securitization is understood as the process in which the state's existence is threatened, requiring emergency actions that may even exceed laws and political procedures (BUZAN; WEAVER; WILDE, 1998). Thus, cyber securitization can be interpreted as the process of emergency action against a potential threat in cyberspace. The actors in the cyber environment are states, institutions, industrial and business corporations, financial and services sectors, political and religious activist groups, digital criminals, among others. The variety and number of actors multiply as technology and access to information advance. Included among the actors are both those who will provide the securitization discourse and those who may be considered threats to state security.

The securitization process is better perceived in the military sector, since the latter is legitimized by the modern state's monopoly of power to protect the nation against threats to national security. Thus, the state is considered the object of reference while the military elites are the securitization actors in charge of determining actions against threats through speech acts (TANNO, 2003). The securitization process becomes evident at a time when cyberspace is recognized by defense documents as a strategic domain posing different threats.

The extent of threats and vulnerabilities will vary according to the relative and absolute capacities of those involved (BUZAN; WEAVER; WILDE, 1998). However, in the sphere of cyberspace, asymmetric capacities and the increasing vulnerability of critical infrastructures alter the nature of the threat, since the peculiarities inherent in cyberspace make it difficult to prevent cyberattacks.

Cyberspace expands the ways in which the state's organizational stability can be undermined; a case in point, the organization of the Arab Spring requires no further comment. Cyber actions with political motivations⁶ which seek to destabilize the government in order to publicize a specific ideal can cause damage to other sectors of society, making securitization more complex and sensitive. Moreover, they can cause the loss of internal and external legitimacy of states that fail to securitize the political sector against cyber threats.

Economic threats can be considered as those "aimed at the economic sectors that guarantee the survival of the state and are essential to the war effort" (TANNO, 2003). Given the interdependence, threats to the economic stability of a state can be understood as global (BUZAN, WEAVER, WILDE, 1998). Thus, cyber threats that target economic gains by stealing bank information – whether at individual, corporate or state level, for example – can cause economic and financial damage to the state, as well as transfer such damage to other interconnected sectors.

Finally, even though it does not specifically address the information revolution in its security study, the Copenhagen School presents, through securitization theory, how, when and what consequences political actors perceive as an existential threat to security based on speech acts – or political discourses – creating an emergency security agenda. The cyber universe expands the range of threats, which actually become even less noticeable due to the aforementioned issues of anonymity and uncertainty. Such peculiarities of the new domain lead to new approaches in the securitization process.

4 Cyberspace in the defense white papers

In view of the possible gap between security, national defense steps; and the fast advance of technology, states have become concerned about protecting and reducing their vulnerabilities through steps capable of promoting some kind of state development in the sphere of security,

⁶ Political threats can be classified as intentional threats – when a state does not recognize the legitimacy of a foreign state/government or the government is rejected by a domestic group due to conflicts of distinct principles – and structural threats – when there are contradictions in the state's organizational principles (TANNO, 2003). According to Buzan, Weaver and Wilde (1998), political threats to a state are those that challenge national sovereignty, since a threat at political level can be transferred to other sectors (BUZAN; WEAVER; WILDE, 1998).

regarding specifically cybernetics. Given the new power arena represented by cyberspace, the securitization process in the defense white papers of Germany, France and Brazil is analyzed by acknowledging cyberspace as a strategic domain.

Germany

The document *White Paper on German Security Policy and the Future of the Bundeswehr*, published in 2016, describes the challenges to the country's security policy. With regard to threats, the issues addressed are terrorism, weapons of mass destruction, uncontrolled migration, inter-state conflicts, climate control, among others. Regarding specifically the cyber domain there is a clear concern with the state's vulnerabilities to potential cyberattacks. On this subject, the document claims that "urgent steps are needed to protect against threats" (GERMANY, 2016, page 36).

The German document does not provide a clear definition of cyber security. However, it presents the concept of information domain as the space in which information is generated, processed, disseminated, discussed and stored. According to the *White Paper on German Security Policy*, cyberspace is the virtual space of all IT systems linked or linkable at data level on a global scale.

The document points out the seriousness of cyberattacks to critical infrastructures that may have consequences for the civilian population, claiming that the effects of the attacks cannot be resolved in the foreseeable future, since there is trend for this issue to get worse. It also claims that cybernetics and the information domain are areas of strategic and international importance and response time must be improved to prevent cyberattacks and information operations, with cyber protection and defense as priority.

We must take preventive steps to reduce this risk through confidence building and conflict resolution mechanisms.

There are few areas where internal and external security are as closely intertwined as they are in cyber space. The threat situation in cyber space necessitates a holistic approach in the framework of cyber security policy. (GERMANY, 2016, p. 38).

With regards to the cyber sector, the *White Paper on German Security Policy* prioritizes the need to reduce the vulnerabilities of critical national infrastructures such as communication, energy and logistics systems. Regarding the threats addressed in the document, concern is raised about attacks by non-state actors, such as terrorist groups and organized crime, besides specialized individuals who could cause serious damage with minimal effort. Such threats confirm the concern with acts that may be brought about by non-state actors. Thus, individuals are perceived as international actors in the German document. That in itself would require a deep theoretical discussion on international relations, which goes far beyond the purposes and limits of this paper.

The document does not specifically address the relationship between cyberspace and the civil sphere, but stresses the importance of transparency between the public and private

sectors and the need for cooperation with other states. According to the *White Paper on German Security Policy*, only by means of cyber security policy and cyber foreign policy would an effective protection against cybercriminals and cyberattacks be achieved. The information obtained in the document is summarized in the following table.

Table 1 – Summary of information obtained from the *White Paper on German Security Policy*

Year of Publication	2016
Does the document include a clear definition of cyber security?	No
What does the document say about the cyber sector?	Area of strategic and international importance. Cyber protection and defense are prioritized.
What threats are considered?	Non-state actors. Terrorist groups, organized crime, individuals specialized in infrastructure damage.
What is the stance regarding the involvement of other civil sectors?	Not specified, but the need for transparency among sectors to fight cyber threats is stressed.

Source: Based on Germany (2016)

Germany considers the emergence of new threats as one of the factors behind the need to review its white paper, arguing that “new threats and hazards have emerged in addition to those that already existed” (GERMANY, 2016, p.15). Regarding threats stemming from the cyber domain, there is a section dedicated exclusively to fighting “Threats to Information and Communication Systems, Supply Lines, Transportation and Trade Routes as well as the Secure Supply of Raw Materials and Energy” (GERMANY, 2016, p. 41). In this section the prosperity of German society is seen as dependent on the use of global communications and information, and any “interruption of access to these global public goods on land, in the air, at sea, in the cyber and information domain, and in space involves considerable risks for the ability of our state to function and for the prosperity of our citizens” (GERMANY, 2016, 41).

The document defends the need to improve personnel and technology to enhance the state’s performance in cyberspace. Perhaps as a consequence, in April 2017 the Cyber and Information Space Command (CIR) was created, which corresponds to the cyber branch of the German military (WERKHÄUSER, 2017).

France

The *French White Paper on Defence and National Security*, prepared in 2013 by the French government, expresses concern with cyberattacks – alongside threats of nuclear proliferation, pandemics and terrorism – already in first lines of the preface written by the then president François Hollande.

The document considers the growing insertion of French society in the media as a factor of vulnerability. In this sense, it emphasizes that universal access to cyberspace and the non-identification of perpetrators (the uncertainty issue previously discussed) are the main aggravating factors. In this context, allusions are made to threats in cyberspace, from cybercriminals to cyberattacks led by other nations. Such considerations reveal that in the French white paper cyberspace is understood as an essential environment for the state, a stage for potential challenges and conflicts. “The possibility of a major cyberattack on national information systems in a scenario of cyberwarfare constitutes an extremely serious threat for France and its European partners” (FRANCE, 2013, page 43).

Regarding the questions herein proposed for the comparative analysis, the *French White Paper on Defence and National Security* does not provide a clear definition of cyber security. However, it interprets cyberspace as a conflict area and considers it a strategic priority for protection against threats and attacks. Regarding threats, it considers both non-state actors and states capable of develop espionage and cyberattacks. Concerning the introduction of the civilian sector as an aid to national protection, the document, while involving other sectors of government – in addition to the Armed Forces – does not address the issue of civilian involvement. Table 2 presents a summary of the information obtained.

TABLE 2 - Summary of information obtained from the French White Paper on Defence and National Security

Year of Publication	2013
Does the document include a clear definition of cyber security?	No
What does the document say about the cyber sector?	Cyberspace is considered an area of confrontation and threats. It is perceived as having strategic priority for protection against cyberattacks.
What threats are considered?	Non-state, such as cybercrime and terrorism against state-owned companies. It considers the possibility of cyberattacks in a scenario of cyberwarfare.
What is the stance regarding the involvement of other civil sectors?	Despite involving other government sectors besides the Armed Forces, it does not address the issue of civil involvement.

Source: Based on France (2013)

In the case of France, no new threats are specifically considered. That is due, according to the French white paper, to the fact that the threats alluded to in the document were described in the previous 2008 version. However, the document addresses in its introduction the spread of risks and threats, including terrorism, cyber threats, organized crime, the proliferation of conventional and nuclear weapons. Pandemic, technological and natural risks are seen as strategic issues that may have serious repercussions for France (FRANCE, 2013, p.10).

The French white paper features a specific section on fighting cyber threats which, according to the text, are becoming more prominent with French society's increasing dependence on interconnected information systems. The ability to protect the country against cyberattacks is treated as a matter of national sovereignty. Thus, like the German document, the French white paper emphasizes the need to improve personnel and capability for cyberspace operations. As in the German case, there is no mention of the creation of COMCYBER, the cyberwarfare unit that became operational three years after the publication of the French white paper (REEVE, 2016).

Brazil

The transversality between new and traditional threats suggests the need to adapt the new themes to the Brazilian reality. Aiming to promote transparency and dialogue between national institutions, society and the international community in the sphere of defense, the *White Paper on Brazilian National Defense* ("Livro Branco de Defesa Nacional" – LBDN) proposes to be a mechanism for cooperation among South American countries.

In this sense, the cyber sector was included in the document as a national strategic priority, along with the nuclear and space sectors. The inclusion of the sector in LBDN is related to the creation of the document *Green Paper: Cyber Security in Brazil* ("Livro Verde: Segurança Cibernética no Brasil"), published in 2010. Previously developed to serve as reference for the creation of a *White Paper: Brazilian National Policy for Cyber Security* ("Livro Branco: Política Nacional de Segurança Cibernética"), the document features national strategic cyber security guidelines, besides suggesting efforts for international cooperation and dialogue, especially within the framework of the Organization for Economic Co-operation and Development (OECD).

The Green Paper defines and explains the main Brazilian strategic sectors in terms of opportunities and challenges that involve cyber security, namely: political-strategic, economic, social and environmental, ST&I, education, law, international cooperation and critical infrastructure security. Through them it proposes macro-coordination among sectors and inter-agencies operating in cyber security with the goal of strengthening the Brazilian cyber space. The abovementioned document also states clearly that the development of strategies and standards ensures increased incentives for research and innovation, generating human resources training, greater protection of critical infrastructures and national and international cooperation.

Aiming at structuring cyber security in Brazil, the Green Paper proposes an agenda of initiatives to

[...] support and strengthen its activities in order to enable and expedite the formulation of policies, standards and regulations, research and development of methodologies and technologies, international cooperation and implementation and promotion of macro-coordination to integrate processes, aiming to ensure the availability, integrity, confidentiality and authenticity of information of interest to

the Brazilian state and society, as well as the resilience of its critical infrastructures (BRASIL, 2010, p. 25, our translation).

Although the Green Paper did not meet the goal of launching the national cyber security policy, it enabled national cyber security strategic planning for the National Defense Strategy (END), for the National Defense Policy (PND) and, therefore, for LBDN. Its proposals promoted the protection and development of Brazilian cyberspace, especially by evidencing how important the subject is to other nations. Thus, the interest in attaching importance to the cyber sector resulted in the specification of premises for a cyber defense project and efforts for inter-agency initiatives, as provided in the 2012 LBDN. To this end, the White Paper assigns to the Brazilian Army the responsibility for cyberspace defense.⁷

Within the framework of Army coordination, the document provides for advances in human resources training, as well as the competence to act and protect cyberspace. In order to encourage advances and technological innovations for the defense industry, LBDN suggests the construction of national critical systems and components. In addition, the document indicates the Army Center for Cyber Defense (*Centro de Defesa Cibernética do Exército* – CDCiber) as the agent responsible for strengthening security, with authority to respond to cyber incidents, provide human resources training and protect Brazilian cyberspace. For such purposes, CDCiber operates together with other government agencies pertinent to the sector.

According to LBDN, the insertion of the cyber sector in the framework of strategic defense sectors aims to “ensure the confidentiality, availability, integrity and authenticity of data transmitted through their networks, which are processed and stored” (BRASIL, 2012, p. 71, our translation). Besides regarding it as a long-term goal, the document also indicates actions to be implemented in the short term due to the dynamic nature of the sector. These are: i) construction of the CDCiber headquarters; ii) acquisition of infrastructure, support equipment and defense hardware and software solutions; iii) human resources training; iv) projects to structure the cyber sector.

It is therefore clear that LBDN comprehensively describes the features and competencies assigned to the cyber sector. Regarding concepts and definitions, it does not specify the themes that comprise the scope of cyberspace, hindering the consistency of information and formulation of terms for the performance of responsible bodies. Moreover, the threats to Brazilian cyberspace are not identified. Regarding the performance of other players in cyber defense, LBDN mentions only the participation of government bodies with previous connections with the sector.

⁷ According to the highest Brazilian defense documents (LBDN, PND and END) there are three strategic sectors for national defense: cyber – assigned to the Army; nuclear – assigned to the Navy; and space, assigned to the Air Force.

It is also noteworthy that the first edition of the *White Paper on Brazilian National Defense* was published in 2012; the second edition, of 2016, was only approved by Congress in December 2018.⁸ This paper used as source the 2012 version and the 2016 draft, approved in its entirety by Congress.⁹ Given the widespread use of information and communication technologies in Brazilian society, the 2016 LBDN draft draws attention to the challenges posed to the country by the hybrid or irregular nature of the “conflicts of the future,” which combine regular combat action with information and cyber elements, carried out by both state and non-state actors. The emergence of cyberwarfare is also generally viewed as a challenge for Brazilian defense.

The LBDN draft argues that the “cyber threat has become a matter of concern for jeopardizing the integrity of sensitive infrastructures essential to the operation and control of various systems and agencies directly related to national security” (BRAZIL, 2016, p. 57, our translation). Even so it does not specifically define what a cyber threat might be. However, the cyber sector, together with the nuclear and space sectors, are still considered strategic and a priority for national defense.

The 2016 document still does not provide a clear definition of cyber security. Cyberspace is considered a priority as a medium through which damage can be caused to infrastructure and society, which is increasingly inserted in information and communication technologies. Regarding threats, the document briefly comments on the possibility of attacks by state and non-state actors, but does not delve deeper into identifying or characterizing them. Finally, with respect to involvement with the civilian sector, in addition to assigning to the Brazilian Army the responsibility for cyberspace defense, LBND involves other government and military sectors, considers participation in international forums and addresses the issue of civilian involvement through closer interaction of the Armed Forces with the private and academic sectors.

Therefore, one sees in these defense documents that the efforts to develop clear regulations and goals for operation in the cyber sector are in the initial phase. Little progress was made between the 2012 LBDN and the 2016 draft regarding goals, targets and aspiration. Given the dynamic nature of cyberspace and the speed with which threats change in the contemporary world, the mechanisms to fight cyberattacks must become effective and the documents must detail clearly the duties of the responsible body.

8 Legislative decree PDS 137/2018, which approved the new guidelines for the National Defense Policy (PND), the National Defense Strategy (END) and the review of the White Paper on Brazilian National Defense (LBDN), was published in the Federal Official Gazette on December 17, 2018.

9 For an in-depth analysis of the defense documents of Brazil and other South American countries, see *Guia de Defesa Cibernética na América do Sul* [Guide to Cyber Defense in South America], by Oliveira et al (2017).

TABLE 3 - Summary of information obtained from the *White Paper on Brazilian National Defense (LBDN)*¹⁰

Year of Publication	2016 (draft)
Does the document include a clear definition of cyber security?	No
What does the document say about the cyber sector?	The cyber sector is seen as a priority since cyberspace may be used to cause damage to infrastructure
What threats are considered?	State and non-state. There are no details about what those threats might be.
What is the stance regarding the involvement of other civil sectors?	It involves other government and military sectors and considers participation in international forums, but does not address civil involvement.

Source: Brasil (2016)

The most recent version of LBDN determines the creation of the Cyber Defense Command (ComDCiber) as a joint military organization, to which CDCiber and the National School of Cyber Defense (ENaDCiber) are subordinated. ComDCiber “has as its main responsibilities, among others, planning, guiding, supervising and controlling activities related to operations, intelligence, doctrine, science and technology, as well as providing training in the Cyber Defense Sector” (BRAZIL, 2016, p. 58, our translation). At this point an institutional advance of the cyber issue is identified in the Brazilian documents, due to the creation of a command that is more comprehensive and therefore more hierarchically qualified in terms of personnel, resources and infrastructure than CDCiber, as established by the 2012 LBDN version.

The creation of ComDCiber thus shows an evolution in the perception of the strategic value assigned to the cyber sector by the Brazilian government as a securitization agent. However, it is important to stress that this is not a branch of the Armed Forces as is the case with the German CIR and the French COMCYBER.

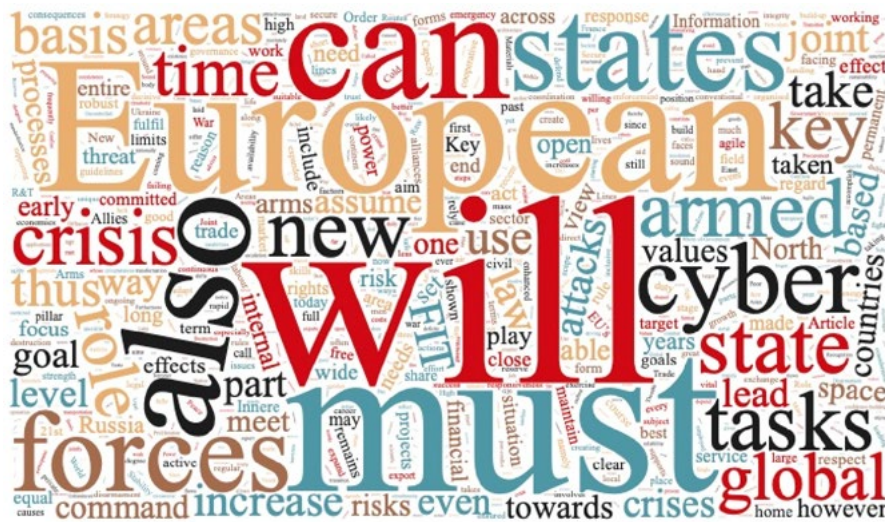
5 Comparative analysis of documents

The comparative analysis of the documents’ contents aims to highlight the varying levels of importance attached to specific subjects by the states in question.

In order to highlight the importance of certain subjects in the documents, an automated word frequency count was performed in each white paper, resulting in the following word clouds:

¹⁰ Although this paper addresses both the 2012 and 2016 editions, for methodological reasons the summary analysis is restricted to the latter document, i.e., the most recent version of LBDN published by Brazil, as was the case with the analyses of Germany and France.

Figure 1 – Word cloud of the German Defense White Paper



Source: Based on Germany (2016)

The prominence of the European context over the national context is evident. It is also observed that the cyber theme appears with significant frequency in the text. This is due to the widespread use of the prefix “cyber” in the paper in words like “cyber threats,” “cyberattacks,” “cyberspace,” among others.

Figure 2 shows graphically the most common words and subjects in the French document.

Figure 2 – Word cloud of the French Defense White Paper



Source: Based on France (2013)

A quick analysis shows the replacement of the term “European,” highlighted in the analysis of the German document, by the word “world” in the French text. The term “cyber” does not have the same prominence in the French document as in the German document.

As observed in the country-specific analysis, the categorization of “new threats” is almost non-existent, hence the disparity in the number of pages addressing “new threats” and “threats.” This is due to the treatment given to non-state threats, which despite being new in the cyber domain, are categorized as threats by the defense documents. This fact indicates an advance in the securitization discourse of countries and contrasts with the conception of exclusively state-related threats.

Another relevant point is the greater number of pages addressing the cyber threat issue compared to threats, which is consistent with the current interpretation in the documents that cyberspace is not only a space of threats but also a strategic domain for the development of the analyzed countries.

The comparative approach also considered the key words present in the documents, which consisted of the following list: Defense, Security, Military, Army, Air Force, Navy, Terrorism, Drugs and Cyber (with their Portuguese equivalents for the analysis of the Brazilian document). The frequency with which these terms appear in the documents was then identified in order to highlight the prevalence of certain subjects over others.

Table 5 – Comparison of keywords

Key-words	Defence (Defesa)	Security (Segurança)	Military (Militar)	Army (Exército)	Air Force (Aeronáutica)	Navy (marinha)	Terrorism (Terrorismo)	Drugs (Drogas)	Cyber (Ciber)
Germany	53	99	49	2	0	0	13	0	28
France	136	136	83	2	2	4	18	2	24
Brazil	132	73	118	58	39	68	2	4	16

Source: Based on France (2013), Brasil (2016) and Germany (2016)

There is a greater prevalence of the cyber theme compared to the themes of terrorism and drugs, traditional subjects in defense documents. This is explained by the drug trafficking and terrorism activities developed in cyberspace, in parallel with the threats that arise in the cyber domain. Moreover, cyberspace is not categorized solely as a threat theme, as with the themes of terrorism and drugs, but as a strategic domain to be securitized and concurrently developed from an economic, social, governmental and civil point of view.

Also conspicuous is the involvement of the military sector in the Brazilian discourse, with the military and the different branches of the Armed Forces being mentioned much more frequently than in the other countries.

From the comparative analysis of the documents it is possible to identify political congruencies and divergences regarding the strategic valorization of cyberspace by nations that are developing their cyber defense policies.

In this sense, it is important to stress that among the analyzed countries Brazil is the only one without documents specifically focused on cyber security at the strategic level. Although the 2010 *Green Paper on Cyber Security* is a specific document that served as the basis for subsequent defense documents, no new documents have been created addressing the current reality of the

cyber sector. While Germany and France already have specific documents in force for the sector, *National Cyber Security Strategy* (GERMANY, 2016) and *National Cyber Security Strategy* (FRANCE, 2015), respectively, in the Brazilian case the document that addresses the cyber issue is the *Military Doctrine of Cyber Defense* (BRASIL, 2014).

6 Conclusions

Recurrent concern with threats posed by state and non-state agents, as well as acknowledgment of infrastructure and social vulnerabilities resulting from society's greater insertion in and consequent dependence on cyberspace, legitimize the latter as a stage for power relations nowadays. Therefore, the analysis of cyberspace securitization in the national defense white papers of Brazil, Germany and France contributes to determine and compare national defense and security strategies.

At a time when cyberspace is recognized as the stage for economic, political, military and social relationships, it is understood that the securitization discourse of states takes shape in their defense documents. In the documents consulted and analyzed, the cyber sector is considered a strategic and priority domain in which the threats and vulnerabilities to which a state is subject are defined (even if comprehensively). The bodies responsible for protecting the state in cyberspace are also defined. Other than that, the practice of identifying threats and objectives by securitization agents – in this case the state – agrees with the securitization process advocated by the Copenhagen School.

Therefore, the recurrent presence of the cyberspace issue and its recognition as a strategic and priority domain from the point of view of national defense legitimizes and justifies this study. Despite the theoretical challenges imposed by the particularities of cyberspace, it aimed to adopt a practical approach to the comparative analysis of the cyber sector in the defense white papers of Germany, France and Brazil. Therefore, it is understood that the perspectives of the Brazilian cyber sector should be further explored in order to guide the actions and responsibilities of the agents involved and offer possibilities of growth to cyber security in Brazil.

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The brazilian participation in the United Nations Integrated Multidimensional Mission for the stabilization of the Central African Republic: a study regarding its geopolitical viability

La participación brasileña en la Misión Multidimensional Integrada de las Naciones Unidas para la estabilización de la República Centroafricana: un estudio sobre su viabilidad geopolítica

ABSTRACT: Recently, the Brazilian government was consulted by the United Nations (UN) and has conducted studies to participate in the Integrated Multidimensional Mission of the United Nations for the stabilization of the CAR (Central African Republic) (MINUSCA) by sending troops. In this context, the current article aims to analyze the Central African issue, concluding on its influence in the Brazilian geopolitics for Africa. Initially, the Central African issue was analyzed. Then, the main geopolitical actions of Brazil for Africa were described as mentioned in the National Defense Policy, the National Defense Strategy and the foreign policy guidelines of the Ministry of Foreign Affairs. Finally, the Central African issue was related to the geopolitical actions of Brazil in Africa, in order to solve the problem proposed and to evaluate the feasibility of the participation of Brazilian troops in MINUSCA, from the perspective of geopolitics.

Keywords: Central African Republic. Peace operations. United Nations (UN). Geopolitics. Western Africa.

RESUMO: Recentemente, o governo brasileiro foi consultado pela Organização das Nações Unidas (ONU) e tem realizado estudos no sentido de participar da Missão Multidimensional Integrada das Nações Unidas para a estabilização da CAR (MINUSCA) com envio de tropas. Nesse contexto, o presente artigo tem por objetivo analisar a questão centro-africana, concluindo sobre sua influência na geopolítica brasileira para a África. Inicialmente, foi analisada a questão centro-africana. Em seguida, foram descritas as principais ações geopolíticas do Brasil para a África, conforme preconiza a Política Nacional de Defesa, a Estratégia Nacional de Defesa e as diretrizes de política externa do Ministério das Relações Exteriores. Por fim, relacionou-se a questão centro-africana com as ações geopolíticas do Brasil na África, a fim de se solucionar o problema proposto e no intuito de avaliar a viabilidade da participação de tropas brasileiras na MINUSCA, sob a ótica da geopolítica.

Palavras-chave: República Centro-Africana. Operações de paz. ONU. Geopolítica. África Ocidental.

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1 Introduction

The Central African Republic (CAR) is an old French colony located in the hinterland of Africa, which gained its independence in 1960. Since its emancipation, the country started to be governed by a series of autocratic governments, which contributed to the current instability in the region.

However, the root of the crisis in the CAR is at the French policy of assimilation, which guided the entire colonial administration of the former French Equatorial Africa (KAH, 2016, p. 42). Through this policy, the metropolis formed local aristocracies, endowed with privileges that, on the other hand, collaborated with the colonizers, thus leading to an ethnicization of the post-independence state, because the elites began to privilege their ethnic groups in the exercise of politics. This situation, until the present days, is one of the main causes of conflicts that devastate the country.

However, other reasons can be listed to explain the current conflict in the CAR. Abdenur and Kuele (2017, p. 1, our translation) state that

the violence in the country is something recurrent, involving historical roots, such as the cattle dispute and the control of the exploitation of diamonds, the discontent of minorities and the absence of a State. These characteristics interact with an extremely dynamic panorama since 2013, whose immediate causes are related to the rapid fragmentation and reconfiguration of illegal armed groups, especially the former Seleka coalition and the anti-Balaka militias, acquiring sectarian dimensions. The combination of these historical and contemporary elements leads to a scenario of high unpredictability and creates challenges for the support of peace.

The aggravation of the crisis in the CAR has led to the deployment of several UN peace missions, and the most recent ones are: the United Nations Mission for CAR (MINURCA) (1997-2000), the Integrated Office of the United Nations for peacebuilding in the CAR (BINUCA) (2010), the International Mission to Support the CAR (MISCA) (2013) and, more recently, the Multidimensional Integrated Stabilization Mission of the CAR (MINUSCA) (2014 until the present days) (UNITED NATIONS, 2014).

MINUSCA currently has more than ten thousand soldiers, one thousand eight hundred policemen, in addition to the civilian component of the mission (UNITED NATIONS, 2014). Within the military component, there are officers of the Brazilian Armed Forces in the role of military observers and staff officers, but the troop consists predominantly of armed forces of the African Union and the European Union. However, recent scandals involving United Nations (UN) military personnel in the CAR have generated prejudice to the troop image among the local population and the international community, which has affected the credibility of the mission (GIELOW, 2017a).

At the same time, Brazil ended its participation with troops in the United Nations Mission for the Stabilization of Haiti (MINUSTAH)¹ on October 15th, 2017 and, due to the

¹ MINUSTAH was established in Haiti in accordance with United Nations Security Council Resolution Number 1542 of April 30th, 2004 (UNITED NATIONS, 2004), after the crisis that was set in the country, with the resignation of the then-President Jean Bertrand Aristide. The military component of the mission was under the command of Brazil, which also had the largest number of troops in the country, which gave it a relevant international projection.

success of its work in the Caribbean country, it has been probed by the UN to send troops to other missions in Africa, and CAR is one of the possible destinations (GIELOW, 2017b).

However, the relevance of the Brazilian participation in MINUSCA has been questioned, insofar as the CAR is not a part of the Brazilian strategic environment (Western Africa) (FREITAS, 2004) and the fact that Brazil would not be able to afford the financial burden of one more peacekeeping mission. According to government information, Brazil spent, around two billion and five hundred million reais (Brazilian currency) in its participation of MINUSTAH and was reimbursed in only nine hundred and thirty million reais (Brazilian currency) by the UN (GARBIN, 2017).

In this context, the present research aims to answer the following question: to what extent does the Central African issue influence Brazilian geopolitics for Africa? It is hoped, with the answer to this problem, to conclude regarding the feasibility of sending Brazilian troops to CAR, based on geopolitical premisses.

The Federal Constitution of 1988 recommends in its fourth article that Brazil is governed in its international relations by several principles, among them, the peaceful solution of conflicts and the defense of peace (BRASIL, 2011), highlighting the concern of Brazilian foreign policy with initiatives for world peace, including peace operations.

Historically, Brazil has contributed to many peace missions, from the League of Nations until the present days. The presence of an officer of the Brazilian Navy in the League of Nations Commission that managed the conflict between Colombia and Peru between 1933 and 1934 marks the beginning of Brazilian participation in these operations (RIBEIRO, 2014). But between 1947 and 1951, under the aegis of the UN, Brazil sent two officers to the Balkans (RIBEIRO, 2014), demonstrating that the country is a historic contributor to the United Nations. Since the creation of the UN in 1945, Brazil has already participated in fourteen peace operations, having been MINUSTAH in Haiti the most relevant in terms of the quantity of employees (more than 1,000 soldiers per contingent).

Thus, the research is justified, because a study regarding the feasibility of the employment of Brazilian peacekeepers in CAR is a matter of national interest, insofar as one of the national defense objectives (NDO), as stated in the National Defense Policy, is “to contribute with the increase of Brazil’s projection in the concert of nations and their insertion in international decision-making processes” (BRASIL, 2012, p. 13). Therefore, intensifying Brazilian participation in international operations would contribute to this NDO (BRASIL, 2012).

It is also worth emphasizing that this paper consists of an article of bibliographical and documentary revision, whose general objective is to analyze the Central African question, concluding on its influence in the Brazilian geopolitics for Africa. To this end, the following specific objectives were established: to analyze the Central African problem; to describe the main geopolitical actions of Brazil for Africa at the present days; to relate the Central African issue with Brazil’s geopolitical actions in Africa; and to evaluate the feasibility of the Brazilian participation in MINUSCA, from the point of view of geopolitics.

Due to the qualitative perspective of this research, two theoretical variables were adopted: the Brazilian geopolitics for Africa (dependent variable); and the Central African issue (independent variable). Hence, it is intended to verify to what extent each of the factors of the independent variable exerts influence on the main Brazilian geopolitical actions in the present days, ongoing in Africa.

2 The central african issue

The process of decolonization in the regions of Africa under French rule increased considerably after the Second World War. The self-determination of peoples, reinforced by the newly created UN, and the economic weakening of the European powers in the post-war period were preponderant factors to foster the longing for independence of African countries (ARRUDA, 1988).

France, in an attempt to maintain its dominions, developed a policy of assimilation aimed at creating elites in the French style in the colonies, endowed with all the privileges of the French citizens, whereas a large part of the population remained unintegrated and slavishly exploited (ARRUDA, 1988; KAH, 2016).

Thus, even with some concessions given by the French Constitution of 1946, the triggering of liberation movements in the colonies was inevitable, and by the way, many of them were marked by violence (ARRUDA, 1988; BOUITY, 1996).

CAR became independent from France on August 13th, 1960, under the government of David Dacko, who during his term, made his party, the so called *Mouvement d'Evolution Sociale de l'Afrique Noire* (MESAN)², become the only one legally established in the country. With this issue, he began to favor his supporters, creating political positions and raising his salaries, contributing to the discontent of the population and to aggravate the economic situation of the country (BOUITY, 1996; GILES-VERNICK; O'TOOLE; KAH, 2016; VAN HOOGST RATEN, 2017).

The political sectarianism and the successive economic crises in the country, generated to a great extent by the political mentality developed with the assimilation of the colonial time, contributed to the aggravation of the stability of the CAR, which has suffered numerous coups d'état (GIROUX, LANZ, SGUAITAMATTI, 2009) which have compromised, to the present days, the local infrastructure, have emptied the economic investments in the country and have increased the political and institutional crisis.

More recently, in 2005, after the election of General François Bozizé to the presidency of the CAR, conflict between government forces and rebels in the north of the country led to the flight of tens of thousands of civilians to Chad (GIROUX; LANZ; SGUAITAMATTI, 2009). At the same time, clashes in Darfur have directly affected the region, which has also been the target of violence from that region. Meanwhile, in the south of the country, Ugandan rebel groups, notably the Lord's Resistance Army (LRA)³, also violated the territory of the CAR, following an offensive led by the Ugandan government against the groups, generating more security problems for the Central African population (GILES-VERNICK; O'TOOLE; VAN HOOGST RATEN, 2017).

In 2012, after arbitrary arrests carried out by Bozizé under the pretext of a possible coup d'état that could be ongoing, a rebel coalition called *Séléka* was created, composed of Muslims from the northeast of the country, led by Michel Djotodia. The most probable causes for the

2 The Movement for the Social Evolution of Black Africa (MESAN) party was founded in 1946 by Barthélemy Boganda. MESAN exercised control of the first territorial assembly of the CAR in 1957 and was the party of the first president of the country, David Dacko (GILES-VERNICK; O'TOOLE; VAN HOOGST RATEN, 2017).

3 LRA is a militant group led by Joseph Kony who fought a war against the government of Uganda and neighboring countries from the 1980s (BUNTING, 2011).

emergence of the *Seléka* were government corruption, ethnic and religious issues - insofar as the Muslims did not feel represented politically - and government incompetence in promoting the country's development (CAMPOS *et al.*, 2016; KAH, 2016).

Even after a peace agreement between the rebels and the government in 2013, the *Seléka* group overthrew Bozizé, taking over the presidency Michel Djotodia. However, due to the economic crisis, Djotodia did not have the resources to finance the *Seléka* and thus failed to maintain the cohesion of the rebel group, which was largely made up of foreigners, who depended on the currency received in the group for their subsistence. Having seen that they were not able to return to their countries of origin, they began to rely on local looting (CAMPOS *et al.*, 2016). This situation led to the emergence of Christian militias called *Anti-balaka*, which aimed to combat the *Seléka* (CAMPOS *et al.*, 2016).

Faced with the chaos generated by conflicts between Christians and Muslims, the UN has authorized a number of interventions between December 2013 and the present days, the last intervention was from MINUSCA, in order to contain sectarian violence, thus preventing the conflict from turning into genocide (UNITED NATIONS, 2014).

It must be noted that the UN and other regional and international organizations, before 2013, had already undertaken a number of interventions in the country in order to ensure stability in the region. Table 1 below shows the main external interventions that took place in CAR:

Table 1 - External interventions in CAR

MISSION	PERIOD	LEADERSHIP
MINURCA	1998-2000	UN
BONUCA	2000-2009	UN
FOMUC	2003-2008	CEMAC* (Economic and Monetary Community of Central African States)
EUFOR Tchad/CAR	2007-2009	EU (European Union)
MINURCAT	2007-2010	UN
MICOPAX	2008-2013	CEEAC** (Economic Community of Central African States)
BINUCA	2009-2014	UN
SANGARIS Operation	2013-2016	France
MISCA	2013-2014	African Union
EUFOR CAR	2014-2015	EU (European Union)
MINUSCA	2014-current	UN

*Economic and Monetary Community of Central African States (CEMAC) (KAH, 2016).

**Economic Community of Central African States (CEEAC) (KAH, 2016).

Source: ABDENUR; KUELE, 2017.

Added to the factors of instability in the country is the fact that its armed forces do not have the structural capacity to deal with the conflict between rival factions. CAR has a small army, an aeronautics service and a national police force, but military service is not compulsory

(CENTRAL INTELLIGENCE AGENCY, 2017). Besides, several internal rebellions in the military and the difficulty in reintegrating ex-combatants show the disruption of military institutions (MARQUES, 2015). Thus, with few reservists, internal revolts and lack of resources to support an armed force compatible with their needs, the country is highly dependent on UN forces to maintain its stability and security.

At the beginning of 2015, the United Nations Specialized Commissioner for Refugees (UNHCR) had estimated that the number of refugees was four hundred and fifty-one thousand. But the number of internal displaced persons, who were displaced at the beginning of 2017, was close to six hundred thousand (CENTRAL INTELLIGENCE AGENCY, 2017), which, for a population of approximately five million six hundred thousand people, is a very significant number.

Still concerning the psychosocial situation of the CAR, it is worth mentioning that the country counts on more than 80 ethnic groups, each one with their respective languages and cultures. In addition, there are different religious groups in the country, 35% of the population inclined to indigenous cults, 25% to Protestantism, 25% to Catholicism and 15% to Islamism (ALUSALA, 2007 *apud* KAH, 2016). Thereby, the religious and socio-cultural diversity existing in the country is a factor that potentiates internal conflicts (BOUITY, 1996), which is very evident in the recent conflicts between the *Seléka* and the *Anti-balaka*.

The country's economy is basically dependent on subsistence agriculture, timber extraction and mining, mainly diamond, gold, copper and uranium (KAH, 2016), which makes CAR a country with natural resources with the potential to generate conflicts. Marques (2015) reports that much of the country's weak economic development is due to illegal exploitation of natural resources, precarious infrastructures and the priority given only to the capital, which has caused serious social inequalities.

Therefore, despite the fact that CAR is a member of CEMAC (Economic and Monetary Community of Central African States) and CEEAC (Economic Community of Central African States) and owns large quantities of mineral reserves (KAH, 2016), smuggling of these resources, lack of transport infrastructure and lack of exit to the sea (only through river ports) make it difficult to dispose of the country's production, thus compromising the economic development of CAR (CENTRAL INTELLIGENCE AGENCY, 2017).

Thereby, it can be partially concluded that state bankruptcy in the CAR is a factor of regional destabilization in Africa. Conflicts erupted in the country have generated a humanitarian crisis that directly affects neighboring countries, with an increasing number of refugees. Besides, violence in the region, exacerbated by the flow of refugees and the incapacity of the armed forces, has extrapolated the country's borders, affecting other adjacent nations, including those in Western Africa, which are part of the Brazilian strategic environment.

3 The brazilian geopolitics for Africa

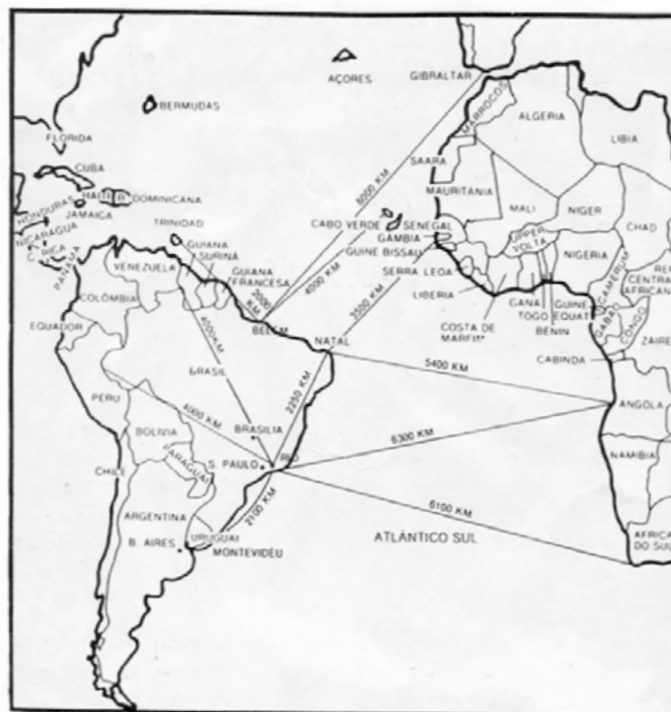
The word "geopolitics" first appeared in the writings of Swedish professor and jurist Rudolf Kjellén in 1899. For Kjellén, geopolitics consists of "State science as a geographic organism, as it manifests itself in space" (CHAUPRADE, 2001 *apud* BRAGA, 2011, page 147).

In this context, from the 1920s, pioneering studies of geopolitics emerged in Brazil, with highlights such as the works produced by Everardo Backheuser, Delgado de Carvalho and

him, “the advantage of our maritimity will always be based on a respectable strategic presence in the South Atlantic” (MATTOS, 2000).

Within Nicholas Spykman’s strategic conception of containment of Soviet expansionism, as well as Golbery, Meira Mattos advocated the creation of a collective defense system in the South Atlantic, involving Western African countries, integrated with the structure of defense of the West as a whole (GABRIEL, 2012), reinforcing that the region was vital for Brazilian national security. Picture 2 below shows the geostrategic projection of Brazil according to Meira Mattos and demonstrates the importance of the South Atlantic and the west of the African continent for Brazilian geopolitics:

Picture 2 - Geostrategic projection of Brazil according to Meira Mattos



Source: MATTOS (2000)

Although, historically, there have been periods of oscillation in bilateral relations between Brazil and Africa, especially at the time of the decolonization of that continent (ASSIS, 2011), nowadays, Brazilian foreign policy recognizes the relevance of Africa and the South Atlantic for the projection of the country in the international scenario, not only in the defense field, but also in the economic and commercial scope (BRASIL, 2017), in line with the theoretical assumptions of the Brazilian Geopolitical School.

The growing importance of oil and natural gas in the world economy places special emphasis on the recent oil basins discovered off the coast of countries covered by the South Atlantic (NEVES, 2015). Besides, the research indicates that this important oceanic region has resources of high economic value, such as iron, manganese and polymetallic sulphides, mainly around the archipelagos of São Pedro and São Paulo and Trindade island. (BROZOSKI; PADULA, 2016).

Among the main Brazilian objectives in the South Atlantic are: the maintenance of the integrity of the national patrimony that includes, besides the territorial and patrimonial sea, the waters, soil and subsoil of the continental shelf; the guarantee of free transit for Brazilian foreign trade; and the exploitation of economic potential, including natural resources and trade exchange; projection that guarantees the surveillance on the lines of maritime communication that give access to the Brazilian territory (COUTO, 1999 *apud* COSTA, 2013, page 4, our translation).

Therefore, in view of the geopolitical constraints presented, it can be noted that some current initiatives in Brazilian international relations are directly related to the determinism of space and position between Brazil and Africa, such as the South Atlantic Peace and Cooperation Zone (ZOPACAS), the multilateral IBAS (India, Brazil and South Africa) and BRICS (Brazil, Russia, India, China and South Africa) forums and the Brazilian participation in peace missions in the African countries.

ZOPACAS was created in 1986, through Resolution 41/11 of the General Assembly of the United Nations, in order to promote regional cooperation in the South Atlantic, the social and economic development of its members, the mutual conservation of natural resources and the maintenance of peace and security in the region (UNITED NATIONS, 1986). The establishment of a conflict-free zone in the South Atlantic is in the interest of all Member States, as it allows international maritime trade with minimal security risks, thus contributing to the growth of the regional economy.

In addition, the IBAS forums and BRICS also highlight Brazil's intention to approach South Africa. Needless to say the strategic value of this country for Brazil (BRASIL, 2017), because its coastal zone is a route of passage from the Atlantic to the Indian Ocean, through the Cape of Good Hope. Thereby, closer diplomatic ties between the two countries allow Brazil to extend its trade to the other side of the African continent and to Asia, leveraging the country's geopolitical projection beyond its strategic environment.

Furthermore, the increase in Brazilian participation in peace missions in Africa would increase Brazil's insertion in that continent and contribute to the mitigation of regional conflicts (BRASIL, 2012). A stable Africa would also bring greater stability to the South Atlantic and the Western portion of the continent, regions that present themselves as Brazil's security limit (MATTOS *apud* FREITAS, 2004).

Regarding the extrapolation of conflicts from Central Africa to the rest of the continent, Migon and Santos discuss about it. (2013, p. 8, our translation):

The presence of huge deposits of gold, diamonds and rare metals (especially columbite and tantalite) feeds the dynamics of conflicts in the region, and it has involved five countries and several guerrilla groups in the 1998-2003 civil war, also known as the "World War of Africa."

Aguilar (2015) also reinforces that participating in peace missions is related to the projection of power, achieving foreign policy objectives, increasing the deterrence strategy, strengthening ties with friendly countries, providing humanitarian aid under the prism of

non-indifference, presence in the priority strategic environments for Brazil (such as Atlantic Africa) and support for a greater insertion of the country in the international security decision-making process.

It is also worth noting that Brazilian maritime transport is responsible for a large part of its trade relations, which reinforces the relevance of a peaceful region in the South Atlantic, as the economic interdependence of countries has abruptly increased with globalization (BRASIL, 2012; NEVES, 2015; NYE Jr, 1988).

In short, the stability and development of Africa, especially its western portion, are of interest to Brazilian geopolitics, due to the strategic importance of the South Atlantic for defense (the Brazilian eastern border) and for the Brazilian foreign trade, reinforcing the assertions of the Brazilian Geopolitical School.

4 Impact of the central african issue on brazilian geopolitics for the african continent

If on the one hand, CAR is not part of the strategic environment of Brazil, on the other hand, it is contained in Golbery's "dangerous hemicycle". However, it must be born in mind that the context in which the theory of hemicycles was developed was characterized by the Cold War, in which the East (that was strongly represented by the former Soviet Union) was in the zone of communist influence, while the western governments were in the sphere of influence of the United States.

Although the present conjuncture is distinct from the 1950s, the Golberian theory still applies, mainly with regard to the delimitation of spaces of national interest, in this case, the Brazilian strategic environment. Besides, the South Atlantic remains an important region for the economic expression of national power, noting that it is an area that concentrates a large part of Brazil's commercial outlets (BRASIL, 2012; NEVES, 2015) and which is rich in strategic natural resources (BROZOSKI; PADULA, 2016; COUTO, 1999 *apud* COSTA, 2013), reinforcing the validity of the Golberian hemicycle and the statements of Meira Mattos to explain most of Brazil's current international projection, particularly in relation to Western Africa and the South Atlantic.

Therefore, an instability in the outer hemicycle affects the inner hemicycle, mainly if the reasons for the problem lie in the vicinity of the inner circumference, which defines the Brazilian strategic environment. Thus, it is perceived that the conflict in the CAR affects the neighboring nations of Atlantic Africa, such as Cameroon, Congo and the Democratic Republic of Congo (DRC), especially if the flow of refugees grows towards the Atlantic. It is noteworthy that these countries are part of ZOPACAS and a humanitarian crisis that goes beyond the borders of CAR can affect an important region for Brazilian geopolitics.

Regarding South Africa, which has strategic importance for Brazil (BRASIL, 2017), as can be inferred from the composition of IBAS and BRICS, it is verified that, due to the distance of the CAR, the crisis in that country does not directly affect South Africa. However, it links with several other conflicts in the African continent, such as those in South Sudan, Somalia, Mali, DRC, Liberia and Western Sahara, forming a veritable instability belt in South Africa region, consequently generating effects across Africa. Thus, a South Africa affected

by another source of conflict in its surroundings can negatively impact Brazilian geopolitical actions, primarily for two reasons: firstly, because South Africa has regional leadership on the African continent and is a key element in the stability of Africa; and the second, because the country is a component of ZOPACAS (South Atlantic Peace and Cooperation Zone) and a conflict region on the continent that affects South Africa can jeopardize all security and peacekeeping in that block.

Regarding the Brazilian participation in peace missions in Africa, suffice it to say that the stabilization initiatives of the African continent are very positive for the Brazilian geopolitics (AGUILAR, 2015), noting that Africa is the eastern limit for the security of Brazil (MATOS apud FREITAS, 2004; BRASIL, 2012). Thus, regardless of the location in Africa, these actions must be increased by the positive effect they generate in the geopolitical projection of Brazil and the stabilization of the Brazilian strategic environment.

Besides, other benefits can come from a greater insertion of Brazil in the center of Africa, mainly in the political and economic fields. Stuenkel (2017), while defending Brazil's participation in MINUSCA, states that the developed countries have already proved incapable of solving the many international conflicts alone, and it is imprudent to leave the future of global order in the hands of the few countries.

This statement is aligned with the multilateralism defended by Brazilian foreign policy (BRASIL, 2017), as well as it meets the guidelines of the current National Defense Policy (NDP) (BRASIL, 2012), concerning the increase in Brazilian participation in international operations.

An assertive foreign policy is fundamental to deal with domestic problems, even though contrary arguments may arise. Trade negotiations with other economic blocs, joint investments with other countries in areas such as infrastructure and regional integration initiatives are examples of advantages to be gained by increased foreign relations (STUENKEL, 2017).

In the same way, the assumptions of neoliberalism reinforce the importance of relationships between countries (NYE Jr, 1988) and Brazil recognizes the relevance of increasing interaction with the African continent, either through its Geopolitical School, or through the current actions of the Brazilian foreign policy for Africa (BRASIL, 2017).

Consequently, although Brazilian interests are not directly related to the crisis in the Central African Republic, an active participation of the country in MINUSCA would strengthen its legitimacy to influence future debates on African issues (STUENKEL, 2017), which is also affirmed by Aguilar (2015).

Therefore, it is reasonable to suppose that the bankruptcy of the State, the humanitarian, economic and social crises and the conflict that afflicts the CAR generate negative repercussions for Africa and, as a consequence, also in its western portion. Thereby, it can influence Brazil's geopolitical actions for the African continent, as the instability prevailing in the Central African Republic has a negative impact on ZOPACAS, on South Africa - which is a key factor in the stability of the continent - and on the maintenance of peace in Africa, as a whole.

5 Final considerations

The geographical determinism observed between Brazil and Africa is enough to bring about a natural approximation between the country and that continent. The national geopolitical theses themselves confirm this by mentioning the strategic importance of Africa to Brazil and the need to maintain the stability and security of the South Atlantic. After all, the South Atlantic is fundamental for economic and social development, whether in Brazil or in the African continent as a whole, mainly because it concentrates much of the trade routes on both sides of the Ocean.

The studies of geopolitics in Brazil, when they refer to Africa, focus mostly on the western part of the continent, due to their proximity and relevance, insofar as the Brazilian strategic environment is concerned. However, globalization, economic interdependence between countries and the transnationality of current threats (terrorism and organized crime), which find fertile ground in “failed states” for their activities, are aspects that contribute to the permeability of borders, often potentiating the problems of a state far beyond its boundaries. In this way, the arguments analyzed suggest that the Central African question has considerable potential to affect Brazilian geopolitics on the African continent, although it is not directly contained in Brazil’s strategic environment.

Thus, the Brazilian participation with troops in MINUSCA would be a viable action from the point of view of geopolitics, considering that it would contribute to the stabilization of the center of Africa and, consequently, of the entire continent, including its Atlantic portion, which is the main focus of Brazil’s foreign policy for Africa. In addition, the increase in the number of Brazilian troops under the aegis of the UN would greatly contribute to the projection of the country abroad, making it a major player in the decisions of international politics.

The advantages that can be drawn by the country in its foreign relations are numerous. Investment in the area of defense, increased cooperation between Brazil and Africa, improvement of the image of Brazil in the global sphere and maintenance of peace in the South Atlantic are some of the gains that can be highlighted with a greater Brazilian projection through the UN peace missions in the African continent. To a certain extent, it would be convenient that the success of the military component in MINUSTAH was used by Brazil, noting that the country is in evidence before the United Nations, which has required a greater involvement of the country in peace operations.

However, it must be recognized that a political decision to send military contingents to a country outside the Brazilian strategic environment encompasses issues other than geopolitics. In the words of Aguilar (2011), it is an issue that involves motivations ranging from humanitarian aid, devoid of any other intention, to the international projection itself.

To this end, studies aimed at the political and economic impact of the participation of Brazilian troops in MINUSCA and the logistical implications for the military component for the deployment of its means in the CAR are suggested, given the cost involved in sending troops to the outside and the difficulty imposed to the logistics by the absence of exit to the sea for that country.

At last, it is necessary to recall Brazil's commitment to the peaceful settlement of conflicts, the defense of peace and the prevalence of human rights contained in its Constitution, which are fundamental principles of their international relations. Thus, in addition to the geopolitical tenets recommending a greater Brazilian insertion in Africa, there is also the the responsibility to protect the civilian population of the CAR, that is strongly impacted by a conflict that has extrapolated its national borders and which has considerably affected the neighboring nations.

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The art of war in the 21st century: advancing to the *Multi-Domain Battle*

El arte de la guerra en el siglo XXI: avanzando hacia la Multi-Domain Battle

Abstract: This research provides the examination of the current models of operations adopted by the Armies of the United States of America and Brazil, under the prism of War Theory. The research used a qualitative approach, examining two operational concepts - “Multi-Domain Battle” (USA) and “Full Spectrum Operations” (Brazil) - in order to infer the impact of the respective models on the application of Military Power of both nations. The study indicated that the American concept models a way of fighting that prioritizes a possible conflict of interstate bias, attentive to the advance of China, Russia, North Korea and Iran. It also indicated that the Brazilian concept combines offensive, defensive attitudes and cooperation/coordination with agencies, enabling the coping of fluid threats to security and defense. Finally, it was verified that both concepts form a way of fighting proper to the Land Military Power of each country, requiring specific capacities and investments.

Keywords: Defense. War. Military Power. Multi-Domain Battle. Full Spectrum Operations.

Resumen: El presente artículo consiste en el examen de modelos de operaciones actuales adoptados por los ejércitos de los Estados Unidos de América (EEUU) y de Brasil bajo el prisma de la Teoría de la Guerra. La investigación empleó un abordaje cualitativo a fin de examinar dos conceptos operacionales: *Multi-Domain Battle* (EEUU) y *Operações no Amplo Espectro* (Brasil). Al final, se infiere acerca del impacto de los respectivos modelos en la aplicación del poder militar de ambas naciones. El estudio ha indicado que el concepto estadounidense esculpe una forma de luchar que prioriza un posible conflicto de sesgo interestatal, atento al avance de China, Rusia, Corea del Norte e Irán. Asimismo, ha indicado que el concepto brasileño alía actitudes ofensivas, defensivas y de cooperación/coordination con agencias, lo que habilita el enfrentamiento de amenazas corrientes a la seguridad y defensa. En suma, se verificó que ambos conceptos forjan una forma de luchar propia al poder militar terrestre de cada país y requieren capacidades e inversiones específicas.

Palabras clave: Defensa. Guerra. Poder Militar. *Multi-Domain Battle*. *Operações no Amplo Espectro*.

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1 Introduction

After more than fifteen years of the creation of the Brazilian Ministry of Defense and in light of the four-year cycle of updating the National Defense documents (the policy, strategy and white paper), there is an opportunity for discussion of perspectives specific to the 21st Century. Such an opportunity becomes a necessity as the current world order (KISSINGER, 2015) highlights recurrent volatility in geopolitical - global and regional - scenarios, prompting discussion of new approaches to the use of Military Power¹.

Since the beginning of the 21st century, especially since September 11th, the globalised world has been dealing with a complex set of risks. Several aspects have influenced this scenario: the ease of communication; the perception of knowledge as raw material; the interdependence in the international financial market; the decentralisation of properties business throughout the planet; the frailty (political and regarding security) of the various nations; and the strengthening of criminal organizations and terrorists (BOUSQUET, 2009).

As a consequence, immersed in a reality that is increasingly volatile, societies have lived with diffuse threats - transnational organized crime, international terrorist groups, insurgent groups, regional frictions, humanitarian crises, epidemics, etc. - that render relative the perception of sovereignty and patrimony, creating complex challenges for States and their Armed Forces. Such a context encourages the need to revisit the assertion that “war is more than a true chameleon, which adapts its characteristics to a certain situation” (CLAUSEWITZ, 1976, p. 93, our translation) in order to rethink this phenomenon in the 21st Century.

In this vein, the United States of America (USA) have been prominent in the development of perspectives that reflect the state of the art in the application of Military Power, leveraged by its recurrent participation in conflicts, global and regional, in the 20th and 21st centuries. In particular, the military thinking in American contemporary include “to think, discuss and debate ‘how we fight’ across all levels and domains [...] diverse dialogue in capturing the wide variety of perspectives and expertise is critical to understanding the evolving nature of the future operational environment”² (PERKINS, 2017, preamble). Such a perspective fosters the construction of answers that can account for the unpredictability and consequent mutability of the art of war in the 21st Century.

For its part, Brazil outlines the National Defense as “the set of measures and actions of the State, with emphasis on the military field, for the defence of territory, sovereignty and national interests against threats [...] “ (Brazil, 2012a, p.15, our translation). As such, the Art. 142 of the Federal Constitution establishes that the Armed Forces “are intended for defense of the Homeland, guarantee of constitutional powers and, by initiative of any of these, of law and order” (BRASIL, 1988, our translation). Thus, inserted in the twenty-first Century, increasingly Brazil demand a Military Power capable of confronting the threats of diffuse and volatile, enabling

1 From a macro perspective, it concerns the ability to use force, or the threat of use, in order to influence the behavior of other states and, in a more specific sense, refers to the Armed Forces of a nation, encompassing the personnel, material and infrastructure of the national military apparatus.

2 General David Perkins was the commander of the *United States Army Training and Doctrine Command* (2017-2018).

the capacity³ to: promote interoperability between forces; operate in non-linear battle spaces; to act in an environment of inter-agency; face robust irregular forces; carry operations information; conduct actions in the cyber space; expand the degree of protection (individual and collective), etc (BRASIL, 2014).

In light of this context, the objective of this article is to review current models of operations elected by the Armies of the United States of America and Brazil, under the prism of the Theory of War in the twenty-first century. In this way, the study brings a case study that examined the operative concepts of “Multi-Domain Battle” (USA) and of the “Full Spectrum Operations” (Brazil), inferring about the impact of the respective models in the application of Military Power of both nations in the twenty-first Century. Ultimately, this study seeks to instigate scientific research in Military Sciences by covering a topic that directly converses with terrestrial military doctrine, overflowing dividends to the debate on security and defense in the 21st century.

To this end, the article was structured into five sections, started by this brief introduction. The following presents the perspectives, epistemological and methodological, dealing with the way of thinking and conducting research. Moving forward, we have a theoretical and conceptual framework about the theory of contemporary war, making instrumental the analytic lens of research. In the core, the operative concepts adopted by the armies of the USA and Brazil are examined. Finally, there is the conclusion, inferred about the impact of such models for the application of the Military Power of both nations.

2 Perspectives: epistemological and methodological

In a preliminary way, considering the scope of this research, it is worth paying attention to the fact that “support to the study of issues posed by National Defense is necessary and beneficial, not admitting that the defence and the security of the country can be ensured by means of the exclusive concern of the military, diplomats and intellectuals” (DOMINGOS, 2006, p. 149, our translation), being the object of attention, both in Political Science, and Military Science. Expanding this arena, the National Defense Policy indicates and highlights the need to raise awareness of all Brazilian society about defense issues (Brazil, 2012a, 2012b).

In this effort, since 2010, Brazil has been counting on a Defense Education Policy, which has established initiatives to: spread word about defense in the academic world; promote the equivalence of courses in military and civil education systems; expand the exchange between civil and military educational institutions; and stimulate Defense Research. In particular, the Brazilian Army has activated a process of transformation, attentive to the Military Sciences, included in the list of science studied in the country, in 2001, by the National Council of Education. In this context, the Military Sciences were disciplined as “the system of knowledge related to war art, obtained through scientific research, practices in the military sphere, experience and observation

³ This is the ability required of a force to carry out a certain mission or task.

of the phenomena of wars and conflicts, using the methodology of military Higher Education” (BRASIL, 2010, p. 9, our translation).

Under this prism, it is worth revisiting a “Trinity of War”, outlined by Clausewitz (1976), which served as a basis for thinking this survey and which contains three elements, the principal agents: “violence”, as a force of nature and blind; “uncertainty/probability”, as the assumption of a creative spirit and free; and the “policy”, as an instrument of subordination of the war, making this phenomenon rational. In particular, Clausewitz used the chameleon figure to indicate the changeable and unpredictable character of war, resulting from the infinite variability of interactions between its elements.

In addition, Bassford (2007) observes a model of “Chaos Theory”⁴ in Clausewitz’s thinking, since the “Trinity of War” is self-inclusive and universal, encompassing subjective and objective elements as well as the intellectual, emotional and physical components of war.

As a consequence, considering that the war is a mainly socio political phenomenon, subject to uncertainty, Complexity was the epistemology selected to filter the knowledge recruited for this research, since the mechanistic paradigm it is not enough to absorb the plurality of perspectives that involve the phenomenon. It should be noted that the complexity had its origin in the research in systems of nature and, currently, it has advanced to the social systems. In particular, the research of nonlinear behavior within systems that cannot be described by a single rule or synthesized to a single explanation is highlighted (STACEY, 1995). Thus, to analyze the models of operations of both the U.S. Army and the Brazilian Army, this study encompasses *Complexity Thinking* (RICHARDSON; CILLIERS, 2001), extending the limits to think about the subject and its various nuances.

Advancing to the methodological aspects, the research adopted a qualitative approach, organizing a case study, supported in two micro studies, to then examine the operational concepts of the armies, the US and Brazil, respectively. In this context, in order to collect the necessary impressions, the techniques of documentary and bibliographic research were used to integrate descriptive and analytical efforts in the micro studies (YIN, 2001). At the end, supported by the descriptive and analytical articulation, it was inferred about the impact of the respective models on the application of the military power of the USA and Brazil.

In particular, for the gathering of primary sources, documentary research has selected a list of documents (policies, strategies, doctrines, etc.) referring to the investigated armies in the following websites: Army University Press⁵, the Ministry of Defence⁶ and Command of Ground Operations/Portal of the Army Doctrine⁷. As it pertains to the collection of secondary sources, bibliographic research gathered scientific articles from a list of periodicals previously organized on the basis of editorial adherence to Political Science and Military Science.

4 The “Chaos Theory” deals with complex and dynamic systems, rigorously deterministic, but which present a fundamental phenomenon of instability called sensitivity to initial conditions which, modulating an additional property of recurrence, makes them unpredictable in long-term practice.

5 Available at: <http://www.armyupress.army.mil/>

6 Available at: <http://www.defesa.gov.br/legislacao>.

7 Available at: <http://www.cdoutex.eb.mil.br/>

In addition, the CAPES Journal portal indexers⁸ and Scientific Electronic Library Online⁹ were employed in the collection in question. In the research effort, the search was carried out in the Portuguese, English and Spanish languages, respecting the nuances of each database. For this purpose, the following descriptors were used: security, national defense, war, national power, military power, model of military operations, army, United States of America and Brazil.

3 Theoretical and conceptual framework

In order to outline the analytical framework of this study, perspectives that circumscribe the constructs of power and war, once they become entangled and integrated, were contemplated.

In this sense, initially, Teixeira and Migon (2017), revisiting the Theory of Power, dealing with the perception of the pessimistic Hobbes (1974), based on the maximum of the “war of all against all”, highlight the association between power and violence. From this point of view, the hobbesian perspective proposes a “[...] general inclination of all mankind, a perpetual and restless desire of power after power, that ceased only in death” (HOBBS, 1974, p. 86).

In a second moment, one observes the approach of power as domination (*power over*), based in Weber (1946), Dahl (1957), Bachrach and Baratz (1962). In this context, Weber indicates that power flourishes from the conflict that arises from the dynamics of life in society, considering that men act according to their interests and not by their ideals. Consequently, in politics, the ethical bipolarity between responsibility and conviction makes the struggle for domination, in the full exercise of power *per se* (TEIXEIRA; MIGON, 2017).

Moving forward, one has a third perspective, the approach of power as capacity (*power to*), being Arendt (1970) its defender. In this context, Teixeira and Migon (2017) indicate that the author embraces the dual concepts of “power and violence”, hosted by the vision traditional policy, with the understanding that they are opposites, and that violence *per se* is an instrument, which could degrade the appearance of quality in power. In turn, Arendt presents the binomial “power and consensus”, prioritizing the observation of the public space and thus the instrumentalization of authority and legitimacy for the use of power.

Under a fourth vision, producing the possible intersection between the previous approaches, Foucault (1980) argues that power is in everything and manifests itself in all ways, implying the existence of a relationship between power and knowledge. In particular, it points to the direct relationship between the social knowledge that the actors use to shape the social structure and the consequent relationships of domination established from this knowledge.

Already moving on to the discussion from the perspective of power within the State, Morgenthau (1948) introduced the concept of realistic concept of National Power, alternating the vision of power as the goal for the vision of power as the means to achieve the goals. Such means

8 Available at: <http://www.periodicos.capes.gov.br/>.

9 Available at: <http://www.scielo.org>.

would be materialized by capabilities linked to human resources (population), natural resources (territory), infrastructure (industry) and weapons (armed forces).

In another perspective, already at the heart of the Cold War, Raymond Aron (1962) bases his thinking on defining the willingness of a political entity to impose its will on other entities. Thus, it is proposed to develop three main elements, albeit abstractly, to define the concept of power: the space occupied by political units; the available resources and the management of knowledge to transform it into a weapon, as well as transform men into soldiers; and, finally, collective action corresponding to the various elements (the army, the solidarity of citizens, etc.). In particular, the last element may unbalance the course of conflict, in the case of the success of the Algerian guerrillas against the French troops during the Algerian war of independence.

In addition, the author makes a distinction between power in a situation of war and power in a time of peace. During peace, the means used by power clearly differ from those used in wartime, and further a distinction between defensive and offensive power. In this sense, in the Cold War, the relations of power between States were expanded by means of their own instruments: international relations, foreign policy, defence strategies etc. (ARON, 1962).

In a tight synthesis, based on this brief review of power, politics can be characterized as the tool that directs power within the scope of the State, both in terms of power as resources, and as behavior, in order to obtain predetermined results (NYE JR, 2012). Consequently, the construct of war is an instrument of contingency - the continuation of politics by other means - enabling the State to legitimize the use of violence and thus use force for its national interests (CLAUSEWITZ, 1976).

Inevitably, the theories of power are connected to the theories of war, since hostility is not only manifested by physical violence, but can arise in other ways: economic, psychological and diplomatic (BOBBIO, 1987). Furthermore, in order to give direction to the war, it becomes necessary to apply a tool - the strategy - whose genesis comes from the art of the general (*estrategos*), initially applied to move and park armies in the Ancient Age and, currently, seen as the “bridge” that connects political purpose to Military Power (GRAY, 2006).

Focusing on the perception of The Theory of War, Lind et al. (1989) characterize the evolution of the art of war within the scope of generations, in the light of technological, economic and political-social factors, as summarised in Table 1.

Table 1 - War Generation Taxonomy

Generation of Wars	Main Features
1 st Generation	use of mass and linear combat
2 nd Generation	use of firepower and linear combat
3 rd Generation	use of motion, manoeuvre and non-linear combat
4 th Generation	massive use of technology, asymmetric and loss of state monopoly on the use of force
5 th Generation	massive <i>cyber war job</i> , asymmetrical, informational and hybrid

Source: Lind et al. (1989) adapted by the authors.

From this point of view, the 1st Generation deals with wars based on the principle of mass, evidenced from the Peace of Westphalia (1648) until approximately the American Civil War (1861-1865). In this context, the manoeuvres of absolutist armies were noteworthy, where the smooth soul muskets were the technology that implied the concentration of soldiers in successive lines. In general, it was characterized by a linear battlefield and an orderly military culture.

Next, the 2nd Generation brings together the wars centered on firepower, provided by the technology of automatic loading and machine guns, instigating a linear and frictioned combat. In this sense, it was observed the model of the French Army, during and after World War I, centered in the war of friction by fire. In particular, the 2nd Generation maintained the 1st Generation order culture, observing a centralized, hierarchical decision-making based on detailed orders. On the other hand, the evolution of the size, scale and complexity of the combat imposed a contradiction between the internal culture of the order of the armed forces, and the external reality of a battlefield is increasingly cluttered (LIND, 2004).

Looking at the 3rd Generation, there are wars based on movement and maneuver, where combat began to explore non-linearity in the battle based on: the use of armored vehicles and airplanes; the wide use of radios; and the use of other apparatus derived from scientific and technological development. In this scenario, the so-called “maneuver war”, was developed by the German Army before and during World War II. In particular, speed replaced firepower as the capacitor element, observing a decentralized decision-making focused on the enemy. To this end, the intention of the commander was modeled as a focus to be followed by leaders, from the different levels, in obtaining the results that each situation required, instigating the exercise of the initiative and thus reducing the centralization of actions.

Moving on to the 4th Generation, we observe wars that highlight the relevance of technology in the composition of military power, strengthened by the use of computer, internet, electromagnetic pulses and robotics. From the last years of the Cold War, the fourth generation also reached the spectrum of space war and cyber warfare (LIND et al, 1989). His Prelude was in the Gulf War (1991) on the occasion of the Kuwait liberation campaign.

Adding to this scenario, following the terrorist attacks against the US (2001), the world has seen the strength of terrorist and criminal organizations, which have come to challenge States, making complex threats. In dealing with this new dynamic, military power was dragged into a framework of asymmetric and irregular friction, often intra-state. In this way, Lind (2004) points to the rise of the 4th generation as the greatest change in war since the Peace of Westphalia, since it highlights the end of the state monopoly on war and, just as before 1648, many entities, not just States, are fighting wars.

As a result, new security and defence strategies were modelled, and as early as the 1990s the so-called Revolution in Military Affairs¹⁰ broke out. Next, perspectives on the application of military power were broadened by the lessons of the wars in Afghanistan (2001) and Iraq (2003), making the US and the North Atlantic Treaty Organization (NATO) radiating new concepts and strategies for the art of war.

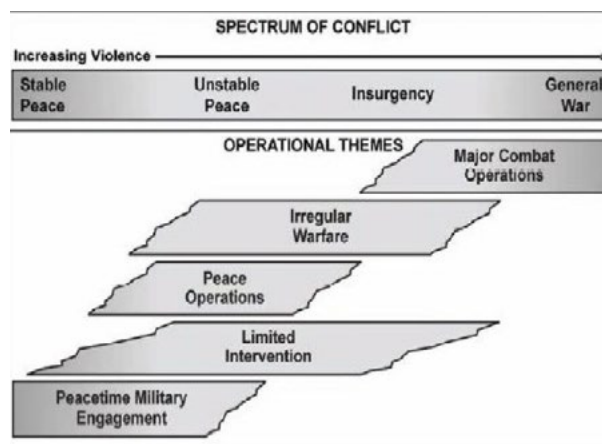
¹⁰ It's the discussion about the theory of the future of war, usually linked to organizational and strategy issues, taking into account the impact of new technologies.

In this span, Colón (2011) reports that the Effects Based Operations, instrumentalized in the Gulf War, foreshadowed a model of action for dealing with crisis situations, integrating the military and civilian effort. However, as a product of the modest results in campaigns in Afghanistan and Iraq, the *Effects Based Operations* have been replaced by a working model based on the integration of the entire national potential - the Comprehensive Approach - becoming the paradigm of contemporary management of crisis and conflict, integrating civilian and military approaches.

Currently, the course of the Syrian war (2011) and the war against the Islamic State of Iraq and Syria¹¹ (2014) began to highlight kinds of conflicts that transcend geographic spaces, overflowing virtual, cyber and social boundaries. In particular, the asymmetry became a characteristic aspect, since “the fighting can hang against groups of enemies formed and recognizable moving between civilians, against enemies disguised as civilians and, with and without intent, against civilians” (SMITH, 2008, p. 325, our translation). In addition, there was a recurring duality in current conflicts, arising from the alternation of scenarios of “war” and “non-war”, as well as the presence of transnational actors in the battle space. This has required a continued adaptation of strategies and tactics for the conduction of operations (SCHNAUBELT, 2009).

In particular, with or without state sponsorship, lethality and the capacity of non-state armed groups have increased and thus encouraged states to explore non-traditional war models (Figure 1). In the current scenario, the military forces have fought mostly non-state opponents - Al Qaeda, Hamas, Hezbollah, Islamic State, Revolutionary Armed Forces of Colombia etc - strengthened by a diversified military apparatus. In this sense, the term “Complex Operations” is used to define “[...] military and civilian activities to restore and secure order. These are also sometimes called stability operations, irregular warfare, or counterinsurgency [...]” (FRANKE et al., 2014, p. 1), summarizing the employment profile today.

Figure 1-the spectrum of violence and conflict



Source: United States of America (2008, p. 3-20).

11 A *jihadist* organization known as the Islamic State of Iraq and Syria or the Islamic State of Iraq and the Levant that operates mostly in the Middle East.

Consequently, as a result of the complexity of the contemporary scene, the scope of a 5th Generation War is already being discussed, extending the use of 4th generation perspectives with the operationalization of drones¹², biotechnology, nanotechnology etc. Within this generation, the concept of “hybrid war” flourishes, perceived as the amalgamation of different types of war, encompassing conventional capabilities, irregular tactics, terrorist actions, the induction of violence and coercion. Such concept has the potential to be instrumentalized, both by state and by non-state actors strengthened by military apparatus, combining strategies of regular and irregular Wars. In particular, it should be noted that the regular forces of a hybrid threat are governed by international laws, but the others escape their reach, hindering the limitation as to the level of violence they employ or the type of target they engage (HOFFMAN, 2007).

Therefore, advancing in the volatility of the spectrum confrontational today, the art of war has been marked by interdisciplinarity (simultaneous actions by military, police, and civilian) and by the multi-dimensionality (integral approach of National Power), in the light of an effort by the inter-agency and of the mass application of technology (BOUSQUET, 2009). It is worth noting that this does not represent the end of traditional or conventional warfare, but it does impose a complicating factor in the conduct of operations, requiring “thinking” about the art of war in the 21st Century (ARQUILLA, 2007).

4 Thinking of The Art Of War in the 21st century

The case of the US Army model

The introduction of the airplane, the submarine, and the aircraft carrier in World War I, and the incorporation of mobile radio communications and radar systems in World War II, vastly increased the strategic commander’s ability to operate across several domains simultaneously. More recently, the development of Air-Land Battle in the 1980s and then Air-Sea Battle in 2013 show military thinking, evolving along the same general line - how to win decisively, even if outnumbered or technologically overmatched, by integrating operations in multiple domains to present enemies with multiple dilemmas (BROWN¹³, 2017, p. 5).

¹² These are all types of aircraft that can be controlled on the 3 axes and that do not require pilots on board to be guided. They are controlled at a distance by electronic and computational means, under the supervision of humans, or even without their intervention, by programmable logic controllers.

¹³ General Robert B. Brown (US Army) is the general commander of the *United Army Pacific (USARPAC)*.

Over generations of wars, the US has sought to design operating models capable of shaping how to fight in the face of each new domain added to the dynamics of the art of war. In light of the contemporary scenario, US military power identifies that its opponents are adapting more and more rapidly to technological competition and have become able to challenge the US in the various domain: human; terrestrial, air, maritime, space and cyber.

In this context, according to the US National Security Strategy: “China and Russia challenge American power, influence, and interests, attempting to erode American security and prosperity” (UNITED STATES OF AMERICA, 2017, p. 2). In particular, the Strategy indicates that these countries act to make economies less free, to expand their military apparatus, to control the flow of information in order to suppress their societies and thus expand their influence. In addition, the document identifies both the Democratic People’s Republic of Korea, and the Islamic Republic of Iran, as dictatorships that violate their respective regions and, consequently, threaten the U.S. and its allies.

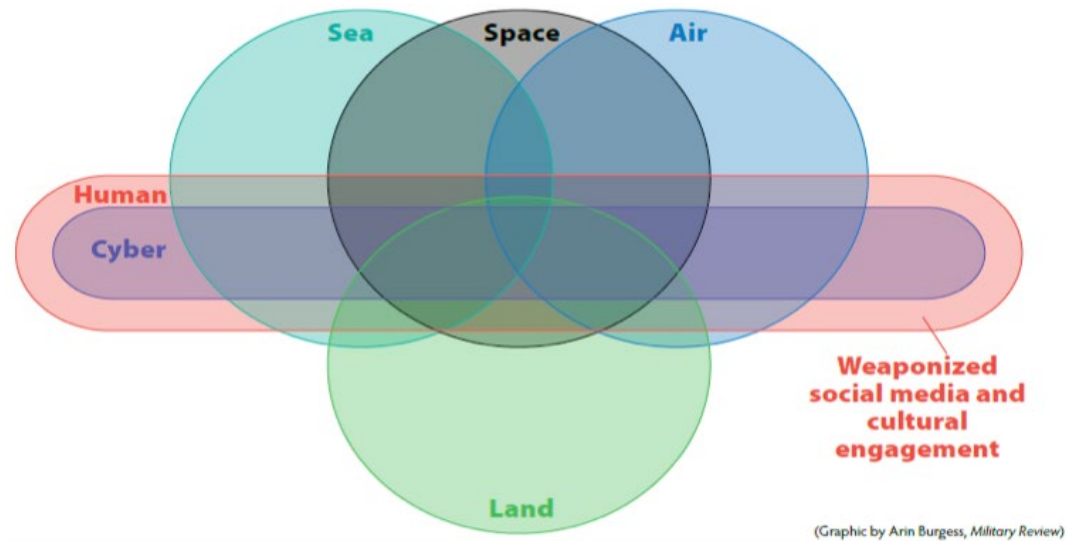
In this scenario, one of the biggest challenges in the United States lies in the fact that much of its contemporary military apparatus is based on technological tools that depend on the use of digital connectivity. Inevitably, in the face of billions of devices connected to the Internet, there is a latent danger in cyberspace and, consequently, a dependence on space resources to enable connectivity. Therefore, the search for the interruption of the opponent’s ‘decision making cycle’ - ability to observe, guide, decide and act (OGDA) - is a primordial aspect so that the military forces can lead the opponent to a situation of disadvantage. From this degradation, the opportunity is built for the imposition of multiple dilemmas that ultimately impute the opponent the challenge of acting in a chaotic environment (BROWN, 2017).

It is clear that the advantages of the US are diminishing as rival states modernize and build nuclear and conventional forces. Still, many actors have become skilled in operating below the threshold of traditional military conflict, triggering covert and clandestine hostilities. In this dynamic, the “fog of war”¹⁴ becomes increasingly more intense in the twenty-first Century and the military thought of the U.S. indicates that “[...] creativity and innovation, when nurtured by an organizational culture that encourages prudent risk taking, is both a force multiplier on the battlefield and the only effective response to the inevitable fog of war” (PERKINS, 2017, preamble).

From this point of view, the U.S. Army has developed and currently hosts the operative concept called “Multi-Domain Battle” (*MDB*). Such a model has been outlined to support the design and conduct of operations able to create a “window of superiority” through multiple domains (Figure 2), which make up the battle field today - human, terrestrial, air, maritime, space and cyber - allowing U.S. military forces to be able to obtain, retain, and exploit the initiative forward to the new profile of their opponents (UNITED STATES OF AMERICA, 2017).

14 A phrase coined by Clausewitz (1976) to describe the unpredictability and fluidity of the phenomenon of war.

Figure 2 - the perspective of the battle in multiple domains



Source: Brown (2017).

The model welcomes the premise that the US will be challenged by sophisticated adversaries, who may be able to present a Multi-Domain defense, in order to deny the creation of a “windows of superiority” by U.S. forces. Such a perspective implies the need for a combat system that is integrated and resilient, and not interdependent, making it possible the maintenance of freedom of action for the application of military power, without depending on the performance in a single domain. Soon, the model proposed by the concept of “Multi-Domain Battle” seeks to ensure the minimum conditions to which military force can prosper and exploit the initiative (physical and psychological) in the context of the other domains that are not denied by the opponent (UNITED STATES OF AMERICA, 2017).

From this point of view, military thinking naturally advances to joint operations¹⁵, as an approach that makes possible the integration of the individual forces and the maximum synchronization of their actions. In this context, the scope of the Goldwater-Nichols Act, signed on October 4, 1986, by then-US President Ronald Reagan, should be revisited. This law reorganized and remodeled the U.S. Department of Defense, historically established by the National Security Act (1947). In particular, the command structure has been reformulated, increasing the powers of the Commander of the Joint Staff, so as to simplify the chain of command, which began to flow from the President, via the Secretary of Defense directly to the commanders of the Fighters Unified Commands. As a result, since then, the commanders of each unique force - the Army, Navy, Air Force and Marines - have accepted the responsibility principle to train and equip the human resources, mobilise the unified fighters commands, going to play a consultative role with the President and the Secretary of Defense.

¹⁵ These are operations characterised by the use of a large number of resources, two or more individual forces, which are conducted under single command. They usually take place at the operational level and have a permanent joint operational staff, which develops standard plans and procedures.

Since the passage of the Goldwater-Nichols Act, joint operational approaches have proved themselves in combat. [...]. However, work remains, especially when considering the rapidly changing global operational environment. Further, the joint task force doctrinal structure used over the past 15 years to promote joint capability has actually driven some incorrect habits of mind that are detrimental in the evolving operational environment. [...] these habits drive the service components to think about their respective operating areas as if in a vacuum (BARTELS; TORMEY; HENDRICKSON, 2017, p. 71).

The result of this history, in spite of the undisputed success of the American systematics of joint operations, such a dynamic has created a dependency, on the part of the Military Land Power, of the joint capabilities also provided by other forces (fires, air defense, anti-aircraft, electronic warfare etc). On the other hand, currently, in light of the concept of “Multi-Domain Battle”, it is evident the necessity of the Military Land Power of the USA to bring together capabilities that enable the conduction of operations overflowing to the multiple domains. In this way, the current model encourages the military force to operate in joint and integrated teams, in favor of simultaneous and successive operations, acquiring capabilities to trigger: kinetic and non-kinetic actions, electromagnetic war, cyber war, integrated anti-aircraft defense and deep and surgical fires.

The concept contemplates the fact that the adversary uses urban centers as spaces to gain an advantage in the dynamics of the conflict. Therefore, it recognizes the need to model the operating environment for the creation of “windows of superiority” in areas that focus on the urban environment, realizing that competition for such windows will be constant. As an example, it is visualized that the launch of static balloons of electronic warfare can create communications restrictions to the opponent, in their electromagnetic domain, in a certain portion of the battlefield and, from there, make possible the creation of a “window of opportunity” in that domain. Next, if explored, this window of opportunity will enable access to other domains, outlining a “window of superiority”, in a given time and space (UNITED STATES OF AMERICA, 2017).

In this context, situational awareness about the enemy is paramount, coming from intelligence efforts that will ultimately allow us to see through the “fog of war” and thus impose a more fluid rhythm of battle than that of the opponent. To this end, according to the National Security Strategy, it is necessary to ensure that American military superiority resists and, in combination with other elements of national power, is prepared to protect Americans against sophisticated challenges. In this sense, President Donald J. Trump points out that “as long as I am President, the servicemen and women who defend our Nation will have the equipment, the resources, and the funding they need to secure our homeland, to respond to our enemies quickly and decisively, and, when necessary, to fight, to overpower, and to [...] win” (TRUMP, 2017, p. 25).

In short, when thinking of the art of war in the twenty-first century, it turns out that the model of the U.S. Army, based on the concept of “Multi-Domain Battle”, is structured in three elements, who were the principal agents: joint integration, the synergy of technological capabilities

and developing leaders that thrive in chaotic scenarios, strengthening the “*Mission Command*”¹⁶. Furthermore, the concept includes the ability to sustain the continuity of the conduct of joint and integrated actions, both simultaneous and successive, in multiple domains, with emphasis on resilience. Ultimately, the concept extends the strategic options¹⁷ of the National Power to achieve US objectives in the 21st Century (BROWN, 2017).

The case of the Brazilian Army model

Brazil outlined a military defense doctrine based on the perspective of national power, defined as the capacity resulting from the integration of the nation’s means, driven by the national will, with the aim of maintaining and conquering the national objectives (BRASIL, 2007). For this purpose, the construction of national power is manifested in five expressions: political, military, economic, psychosocial and scientific-technological. In particular, political expression stands out among the others, setting national objectives, while the military has in the use of force, or in the possibility of using it, its core foundation (ESCOLA SUPERIOR DE GUERRA, 2009).

In this way, aware of the current scenario, the Brazilian State, identifies eleven threats to national security - actions which are contrary to national sovereignty, actions which are contrary to the democratic rule of law, weapons of mass destruction, cyber attacks, illegal activities involving goods of dual use/sensitive technologies, corruption, organized crime, espionage, foreign interference, sabotage, and terrorism - all listed on the National Policy of Intelligence (BRASIL, 2016).

As a consequence, the Brazilian Armed Forces have experienced complex challenges, however, far from war situations *per se*, the result of the reasonably stable framework of the Brazilian strategic environment (OLIVEIRA, 2009). In turn, the Doctrine of Joint Operations in Brazil considers the application of Military Power, both in situations of “war” (employment in the defence of the motherland itself, with the maximum use of violence), and “not war” (jobs such subsidiary, in which the use of violence will occur, in a limited way, or not). Furthermore, it comprises two perspectives of the confrontation: the traditional, between States or coalitions; and nontraditional, coping with non-state actors that promote hostile actions, gathered under the prism of hybrid threats¹⁸ (BRASIL, 2011).

In the face of this plural demand, in the context of the Brazilian Army, since 2013, the document entitled “Bases for the Transformation of the Army” has guided the introduction of

16 It is a command concept, derived from the prussian tactical doctrine, that promotes initiative, freedom and speed of action, within certain restrictions. In this sense, the subordinate, understanding the intention of the commander, his own mission and the context of that mission, is informed of the effect to be achieved and the reason why it needs to be achieved. From then on, he decides, within his delegated freedom of action, how best to accomplish his mission.

17 It should be noted that, currently, the term *Multi-Domain Operations (MDO)* is an evolution and improvement of the concept of the *Multi-Domain Battle (MDB)* published in 2017. It reflects more than two years of experiments, training and exercises (joint and multi-national). The *MDO* expands the *MDB*’s ideas and describes how the Army should contribute with the joint force to deter and defeat strategic contenders, both in friction and in armed conflict.

18 These are a mix of activities, with the frequent combination of conventional and non-conventional military methods, which can be used in a coordinated manner by state and non-state actors but remain below the threshold of a formally declared war.

foundations and perspectives in order to incorporate skills and competencies necessary for the performance of the Military Land Power in the Twenty-First Century. The following, in 2014, the Military Land Doctrine selected a set of values, concepts and tactics to optimize the direction of the preparation of the human resources and the development of means and infrastructure of Military Land Power (BRASIL, 2013, 2014).

As a result, the Army adopted the systematic generation of forces through the system called “Capacity-Based Planning”. This model focuses on meeting the needs arising from the desired effects on military campaigns, aimed at the execution of actions and linked tasks. In this way, the systematic prioritizes the permanent analysis of the conjuncture and prospective scenarios, reducing the risks of misplaced planning, thus increasing the readiness for security and defense. In this process, the architecture is harmonized by the synergy of the seven factors - doctrine, organization, training, material, education, personnel and infrastructure - synthesized in the acronym DOAMEPI. Ultimately, the model promotes a continuous investigation about the effectiveness of the Military Land Power, so as to customize and enhance the fighting power in the face of threats (BRASIL, 2014).

Figure 3 - Operating concept of the Brazilian Army



Source: Brazil (2017b, P. 2-17).

With emphasis on the premise that any future adversaries will not be passive, the preponderance of aggregation of operations - offensive, defensive and cooperation/coordination with agencies - successively or simultaneously, is modeled as the vocation of the Land Force in a singular, joint or combined effort. In this way, the operating concept called “Full Spectrum Operations”¹⁹ (Figure 3) guides the use of force, in space and time, on the part of the Military Land Power, with emphasis on the combination of attitudes and in the approach to different spectrums of the use of force, ranging from unstable peace²⁰ until the total war²¹ (BRASIL, 2017a).

In this sense, the Brazilian Army understands that “the state, by delegating power to us to exercise violence on its behalf, needs to know that we will always act for the Society of which we are servants” (VILLAS BOAS, 2017, our translation). In this vein, engaging with the perspectives of State and Society discussed by Bobbio (1987), connected to the constructs of Power and War, it is a false dichotomy in the relationship State-Society, a time that the supposed opposition between Society and the State is not greater than the synergy - “[...] understood not only in the sense of state that permeated society but also in the sense of state permeated by society” (BOBBIO, 1987, p. 51, our translation). In this sense, the motto of the Brazilian Army, “Strong Arm, Friendly Hand”, materializes the *ethos* of its operative concept, enabling it as guarantor of Defense and National Development.

Thus, this concept advocates the integration between military and civilian vectors, seeking unity of effort in the interagency environment, noting the fact that the convergence of efforts favors actions aimed at curbing the escalation of violence. In this sense, the perspective of the “Unity of Effort” is based on the premise that efforts need to be coordinated in the pursuit of collaboration in support of the objectives of the operation, which should be common between the agencies, despite differences in techniques, tactics, and procedural. In particular, the conciliation of interests and coordination of efforts should be evaluated continuously, in order to avoid the duplicity of actions, the waste of resources and, thus, to facilitate the effectiveness of the operation (BRASIL, 2017b).

For Security and Defence, the concept of “Full Spectrum Operations” enables the instrumentalization of the Strategic Conception of the Army that establishes that the Force should “contribute to the guarantee of the national sovereignty of the constitutional powers, of law and order, safeguarding national interests, cooperating with the national development and social well-being” (BRASIL, 2017b, p. 5, our translation). As such, this concept supports the implementation of the strategies of “Deterrence” and “Presence”, under the premise of the “Inviolability” of the extensive land borders of Brazil (ZAIA, 2013). In maximizing this effort, Military Land Power should be applied as part of a unified action, considering the joint employment and application of the other expressions of national power, thus defeating possible opponents and guaranteeing National Defense.

Currently, acting in favor of Internal Security (“non-war” situation) has been recurrent in operations within the framework of the Guarantee of Law and Order (GLO), in the fight

19 Was based on the concept of “Full Spectrum Operations”, established in *Field Manual 7-0 (Operations)*, U.S. Army, in 2008, which deals with the forces training modular, expeditionary to manage the operations of a wide spectrum and simultaneous - offensive, defensive, stability or civil support - in an era of ongoing conflict.

20 A situation characterised by a general level of tension and suspicion between the parties, including: uncertainty and mistrust; increasing levels of systematic frustration; increasing social and political divisions; and diffuse political instability.

21 This is the military conflict in which the contenders are willing to employ the broad range of national potential - human and material resources - both in time and space to achieve a goal.

against cross-border crimes and in subsidiary actions (CEPIK; BORBA, 2011). For both, the Complementary Law number 97 extends the jurisdiction of the Armed Forces, especially the Army, allowing their use, both in the range of the border, as in the large urban centers (BRASIL, 1999; 2004), and enabling the conduct of operations of cooperation/coordination with the agencies, under the prism of “Full Spectrum Operations”.

Pari passu, also in the scope of the situations of “non-war”, stands out the international projection of the Brazilian Army in peace operations under the aegis of the United Nations (UN). In particular, Brazil participated in the United Nations Stabilization Mission in Haiti (MINUSTAH), which began in 2004, to restore order in that country, following a series of social upheavals and insurgencies that culminated in the deposition of then-President Jean-Bertrand Aristide. In this effort, the Brazilian Army led the military component of the mission from 2004 until 2017, when the Mission was terminated, the period in which the Brazilian Armed Forces, were employed, day and more than a thousand military on the Island of *Hispaniola* (CRUZ AGUILAR, 2005). At that time, the Military Land Power combined defensive, offensive and cooperative attitudes with agencies, under the prism of “Full Spectrum Operations”, in favor of the protection of civilians and the support of that country.

Thus, under the aegis of “Full Spectrum Operations”, the variability of the degree of violence and the change in attitudes impose flexible conduct on planners of ground operations, both on national territory and in expeditionary forces. For this purpose, the Brazilian Army hosts two planning tools, used in a complementary and simultaneous way, in order to increase the production of operational conceptions specific to each mission.

In a first plan, the “Operational Design Methodology” performs the analysis of the guidelines of the upper echelons, the formulation of the problem faced and the development of an approach to solve it. Such a process guides decision-making at the tactical level²², optimizing the conditions for the use of Military Land Power, indicating “what to do”.

In a second plan, the “Situation Examination by the Commander” provides the cartesian elements to the division of the problem into parts and promotes the proposal of lines of action to resolve the crisis or conflict is presented, establishing a method of “how to do”, in the light of the concept of the operating of the “Full Spectrum Operations”.

In summary, when thinking of the art of war in the Twenty-First Century, it turns out that the model of the Brazilian Army, supported by the concept of “Full Spectrum Operations”, structures in combination of attitudes offensive, defensive, and cooperation/coordination with agencies, including the approach of different spectrums of the use of force, since the peace unstable until the total war (BRASIL, 2017a). In addition, it instrumentalizes the strategic conception of the Army, with emphasis on the presence, deterrence and inviolability of the territory. Finally, the concept moves forward in the context of joint operations, strengthening unified actions with the other forces, Navy and Air Force. Ultimately, expands the strategic options of the Brazilian State and to optimize the National Defence in the scenario of the XXI Century.

22 This is the level at which combat, logistics and support actions are carried out in general. At this level, each group of forces triggers its tactical or administrative missions, and it is up to the operational commanders to harmonize the spectrum of joint action. Furthermore, planning at this level is more mechanical, rigid and objective than creative, more tied to the campaign manuals, although it always instigates the personal initiatives of the commanders.

5 Conclusion

This article established the goal to analyze the current models of operations adopted by the Armies of the United States of America and Brazil, under the prism of the Theory of War, operationalizing a case study that examined the operative concepts of “*Multi-Domain Battle*” (USA) and of the “Full Spectrum Operations” (Brazil). Thus, as a result of the scope developed in this concluding section, there is an inference about the impact of the respective models on the application of military power, of both nations, in the 21st Century.

Initially, the study was based on the perspective that, after the Cold War, the threat of bipolarity gave way to an international scenario where the risks are diffuse and amorphous. In this scenario, new geopolitical dynamics have allowed conflicts to transcend the geographical space and to be triggered at virtual, cybernetic and social borders, highlighting that contrary to the eternal and universal realities of war, their subjective nature always changes, at different rhythms and epochs. In summary, in the contemporary scenario, it was observed that:

Not understand the war based on a reflection on the continuities and changes generates the risk about which he warned the nineteenth century theoretical prussian, Carl Von Clausewitz: to see the war as “something autonomous” instead of “an instrument of policy,” does not understand “what kind of war we are involved” and attempt to transform it “into something that is alien to his nature” (McMASTER, 2015, p. 30, our translation).

Subsequently, it was found that the volatility and the geopolitics of today’s conflicts have led to a new way of “thinking” the art of war in the twenty-first Century, considering: a vision for interdisciplinary and multi-dimensional; the participation of non-military actors; the loss of the monopoly of violence on the part of the State; the mass application of technology; and the involvement of full national potential. Similarly, the current conflict scenario demands a dual readiness on the part of the military power of states, both to overcome a conflict of low intensity, and to face conventional friction - limited, total or ultimately at the nuclear scale.

In this scope, the result of the analysis of the model of the U.S. Army, it is inferred that the operating concept of “*Multi-Domain Battle*” models a way of fighting, able to be applied in the face of a possible conflict of bias on the interstate, attentive to technological progress and geopolitical intentions of their potential contenders today - China, Russia, North Korea and Iran - which are identified in the framework of the USA National Security Strategy.

In addition, this concept directs U.S. military power to the perspective of multi-domain resilience, that is, the ability to maintain the battle rhythm in a given domain when another is denied during the conduction of military operations. To this end, it is estimated that the U.S. military will have to prospect and acquire advanced technological capabilities enabling the continuation of unified actions, both simultaneous and successive, in multiple domains. As a consequence, this demand will lead to the reconfiguration of defense products, accelerating the flow of investments in the U.S. military industrial complex and ultimately impacting the world defense economy from an “weapons race” perspective.

In turn, the result of the examination of the model of the Brazilian Army, it is concluded that the operating concept of “Full Spectrum Operations” models a way of fighting able to activate and combine attitudes offensive, defensive and cooperation/coordination with agencies, allowing operations in different spectrums of violence, so as to confront fluid threats, which holds the potential to harm the security and national defence. In addition, it is noted that this concept, by instrumentalizing the combination of attitudes, extends the Brazilian Military Power in the application of the strategies of “presence” and “deterrence”, thus contributing to the inviolability of the territory.

However, in so far as it allows the format of cooperation/coordination operations with agencies as a primary effort, this operative concept imputes to the Brazilian Military Power the need for dual readiness, both to act in the softer band of the crisis/conflict spectrum, and to meet the demand for a possible total war. As a result, such a requirement implies in investments and dressage plurals that, in the last instance, may impact on the effectiveness of the use of force in a situation of interstate conflict, as well as in the efficiency of investments and development of defense products of the Brazilian military apparatus.

On the other hand, this concept encourages the “Unit of Effort” approach (Figure 4), optimising the principle of “savings of means”, in that it avoids duplicate efforts and maximizes interoperability for optimal performance, leveraged by the pool of capabilities of the national potential. Furthermore, the “Unity of Effort” promotes common understanding of the problem generator of the crisis/conflict, shaping of a problem-oriented design and, consequently, fostering an action unified, advancing to the generation of a response to the systemic challenges of the current world, including the other expressions of National Power. Therefore, an “Unified Action” (Figure 4) is the synthesis of synchronization, coordination and/or integration of agency actions (public, private, governmental, intergovernmental and non-governmental) in the core of complex operations, whether they are joint, combined and multinational.

Figure 4 - Theoretical Model “Unit of Effort and Unified Actions”



Source: authors (2019).

In conclusion, it was found that both the model of the U.S. Army, as the model of the Brazilian Army are customized to a demand in the political-strategic arising out of the interests and of the national objectives listed in the face of the challenges to security and defense that each country faces. Thus, the concepts of “*Multi-Domain Battle*” (USA) and “Full Spectrum Operations” (Brazil) model a way of fighting proper to the Military Land Power of each of these countries, requiring postures, capabilities, and investments peculiar to their scopes.

Finally, in the list of developments of the operative concept of the “*Multi-Domain Battle*”, the result of the demand for a multi-domain resilience proposed by the US, a reconfiguration of the defense products worldwide is estimated. As a consequence, this aspect deserves a thorough examination by the Brazilian Army, as it reveals a macro-trend of the art of war, indicating to the Military Sciences a vast territory of research to investigate and prospect optimizations about the way the Brazilian Army fights in the 21st Century.

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