

THE EDUCATION OF MILITARY GEOGRAPHY: BETWEEN MILITARY SCIENCES AND HUMAN SCIENCES (THE CASE OF THE LEBANESE MILITARY FACULTY)

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ABSTRACT: *The concept of military geography has evolved to enclose subjects that have a military intelligence extent, particularly that today's military forces' role is more oriented towards Military Operations Other Than War (MOOTW). This should be taken into consideration in the curricula of military academies in order to train officers in the most efficient way. In Lebanon, the Military Faculty has updated its curricula in 2012 to conform to the missions expected from the Lebanese military forces. This article aims at analyzing the way military geographies were integrated into the curricula of the Lebanese Military Faculty, a way that seems to scatter its materials between Military and Human Sciences.*

KEYWORDS: Military Geography, Military Geographies, Military Intelligence, Curricula, Lebanese Military Faculty.

INTRODUCTION

There is no doubt that geographical information represents an important element in the military conflicts. Actually, military operations are of a geographical nature because they take place somewhere on a site. This place has distinct natural characteristics in terms of topography, climate, water, air, soil, etc. as well as prevailing social and cultural systems. The importance of knowing these characteristics has led to the emergence of military geography, a sub-discipline of geography that focuses on “applying the tools and techniques of geographical inquiry (both physical and human) to assist in the pursuit of military objectives” (Rech et al., 2015). This sub-discipline has been integrated into the curricula of military studies in many countries, mainly Europeans and North Americans. Teaching military geography theories and techniques for junior and senior officers is considered important whether the country is subject to threats or not. This is because military geography knowledge is basic for defending a place, protecting it or maintaining its stability.

Lebanon, a Middle Eastern country which its location made it a frontline with a hot zone – Palestine occupied by “Israel” since 1948 - has been a theatre for many armed conflict. This, coupled to geopolitical ambitions of some countries in the Middle East region and to internal social and political tensions, dragged Lebanon in 1975 into an unrest period that lasted for about 15 years, and in 1982 into a period of invasion by “Israel” and occupation of the majority of South Lebanon district (liberated in 2000). Recently, the repercussions of the Syrian crisis and the infiltration of ISIS and Al-Nusra Front terrorists to some parts of the Lebanese borders with Syria have put the country in peril. Furthermore, the huge numbers of Syrian refugees that entered its territory and the extremely bad conditions in which they live expose Lebanon to inner dangers. All these circumstances impose that Lebanon strengthens its military forces and be ready for any potential attack whether internal or external.

Or, strengthening the Lebanese security forces requires the training of officers in a way to enable them take informed and efficient decisions in any crisis. Therefore, military geography should be a fundamental course in the curricula of the Lebanese Military Faculty, which recruits every year student officers from all over Lebanon and offers them a post-tertiary education in the military field.

This article studies the importance accorded to the education of military geography at the Lebanese Military Faculty. At a time when Lebanon is prone to internal dissidences and external invasions, it's important for the Military Faculty to revisit its curricula and enhance the disciplines that have a military intelligence extent, primary military geography which has witnessed a huge theoretical evolution and has been reshaped into military geographies.

Research Problematic

The emergence of Lebanon as a political entity goes back to the French mandate, more precisely to the year 1920 when the General Gouraud proclaimed the establishment of a state called "Greater Lebanon" which became six years later the Lebanese Republic. Actually, after World War I, France was awarded a mandate for Syria and Lebanon, a geographically integrated territory which were under the Ottoman dominance. The French mandate split this territory into two separate political entities but with some common administrative institutions like the Bank of Syria and Lebanon, and most importantly for our subject the Military School. This School was established in Damascus in 1921 and its mission was to form military officers for the two entities as a step from the process of preparing them to be independent. In 1932, the School was moved to Homs, a city located on the west of Syria.

The Military School enrolled and graduated students each year during October. Candidates were supposed to satisfy a set of conditions, i.e. being Lebanese or Syrian, being between 18 and 25 years old, having a complementary studies certificate, and passing successfully the entrance exam. After completing the three years study period, students were declared officers by a decree and were assigned either a platoon commander certificate in one of the four specialties (artillery, infantry, cavalry or engineering), or a certificate of competence for the rank of lieutenant. Then, they were disseminated in the various units of the army.

The School staff was composed of the commander who was a French officer, his assistant who could be either a Lebanese or a Syrian officer, and a team of trainers who were French, Lebanese and Syrians. As for the Military School curricula, there is no information about the disciplines that were taught at that time, particularly that Lebanon established its own Military School in 1946 after three years of getting its independence so no documents are available from the mandate period. Still, we can assume that the curricula were to a large extent restricted to military studies as all trainers were military officers.

Today, the Lebanese Military School is located at Fayyadieh in Baabda district. It recruits only male Lebanese student officers who hold a Lebanese Baccalaureate and fit for military service. The process of recruitment is extremely hard and therefore only highly qualified students can successfully pass its four phases: the IQ test, the physical fitness test, the medical test and the scientific test. The first year of study is common to all students and is based on the Military School. At the end of this year, brilliant students are selected to join either the Navy School located at the naval base of Jounieh or the Air Force School located at the airbase of Rayak. Remaining students continue their education at the Military School, and upon

graduation they can join one of the Lebanese military forces, i.e. the Lebanese Army, the Internal Security, the General Security, the State Security and the Lebanese Customs.

In 2011, the Military School became “The Military Faculty” as per the Law 163 of 17 August 2011. According to this Law, the naval and air military schools are affiliated to the Military Faculty which is administered by a council called the Military Faculty Council. The most important responsibility of this council is to propose the basic study and training materials in accordance with the expected missions of the Lebanese army (Clause a, article 8, Law 163). This has resulted in the set-up of new curricula in 2012 for general sciences taught at the Faculty. Here, it’s important to point out that the educational system at the Military Faculty classifies teaching materials into two categories: general sciences and military sciences.

The Law 163 indicates that instructors of general sciences at the Military Faculty must be professors at the Lebanese University (article 12) and that graduate students are granted a Bachelor degree in military sciences (article 10). The law emphasizes on the cooperation between the Military Faculty and the Lebanese University when it comes to general sciences (article 8 – clauses أ and ج , article 12). This stipulates that the curricula of general sciences should match that accredited by the faculties of the Lebanese University so graduate officers who wish to continue their studies can validate their general sciences courses.

At present, Geography is considered among the general sciences’ portfolio at the Lebanese Military Faculty. It is taught in the three years of education. For the first year, 20 hours are assigned to a course entitled “Geography”, for the second year 20 hours as well are dedicated to the “Geography of the Arab World”, while for the third year, 22 hours are given to the “Geography of Lebanon”. A comparison with the old curriculum of Geography (before August 2011 when the Military Faculty was named “the Military School”) reveals that the number of hours accorded to its teaching were 29, 26 and 22 hours for the first, second and third year respectively. This drop in the time dedicated to Geography at the first and second year, coupled to the new design of the course materials raise many interrogations about the teaching objectives assigned to it in the reformed Faculty’s curricula. This curricula was supposed to meet the “expected missions of the Lebanese army”, be compatible with the one taught at the Lebanese University, and of course be meaningful to military students.

In this context, it is important to understand how Geography is approached at the Lebanese Military Faculty and how it can satisfy the triple objectives of its curricula. It is also essential to align the course materials of Geography at this Faculty with the materials of military geography, a fundamental discipline in military studies that has witnessed a huge evolution in his subjects, content and perspectives as will show the theoretical part of this research.

LITERATURE REVIEW

Historical evolution of military geography

Although military geography is a recent academic field of interest, its roots go back deep in history to the ancient times, seemingly to the Greek era, as can be concluded from Thucydides’ history of the Peloponnesian war. Bleigs argued that Thucydidesⁱⁱ appreciated “the environmental influences upon the outcome of the military operations from 431 to 404 B.C” (as cited in Jackman, 1962).

In the Roman era, exploratory campaigns preceded military campaigns in order to identify the geographical characteristics of the areas to be attacked. In this respect, Straboⁱⁱⁱ wrote seventeen volumes to describe the world known in his days, and this collection served as a guide for Roman warlords. In the Medieval, Geography was of great importance to prominent leaders and war planners (Napoleon, Clausewitz).

In the 18th century, Geography dominated the military considerations of the West. In Italy for example, Geography was the most important thing to be taught in martial arts. The French Military School was greatly influenced by geography and Major French officers got deeply involved into military geography, especially after the defeat of France in the war with Germany (1870-1871). Indeed, the weak geographical knowledge of French military leaders and the inability of French military forces to read maps (contrarily to the Germans) were considered the major reasons for the defeat. Therefore, new curriculum of Geography was developed for the secondary level of studies, focusing on Cartography and Geopolitics.

In Russia, military geography was given exceptional attention in the military institutions. Officers were asked to conduct geographical surveys inside and outside Russia and to present military explanations accordingly.

In the 19th century, the education of military geography became restricted to military elites. To that, The French School of Geography shifted its thoughts toward possibilism, i.e. humans have the ability to change the natural environment, and therefore this affects the war plans. The Commandant Marga, instructor of Military Art at the “Ecole d’Application de l’Artillerie et de Génie” claimed that Geography should be invested in favor of military issues. His courses have been published between 1880 and 1886 in many tomes under the title “Géographie Militaire”. Marga (1880) stressed on the importance of studying economic, political, urban, transport and all subsets of geography for military leaders. In parallel, he focused on the notion of battlefield (Terrain), which he considered as a space that should be studied in terms of natural elements, human manifestations (population, resources ...), transportation, social and cultural identities ... all information are to be invested militarily.

In the USA, a School of Geography, History and Ethics was established in 1818 at the United States Military Academy West Point (Smith, 2002). A number of geographers has joined the School and worked to engage Geography with military issues.

During the two World Wars, Geography has been concretized as a useful material in the preparation and in the command of military operations. Based on the concept of battlefield, the method of study consisted of an analysis of the nature of the field, its waterways, climate, political and administrative aspects, resources, transportation networks, etc. This knowledge should precede the study of purely military elements.

After World War II, and as a result of the technological advancement, particularly the development of detection methods (radars, satellites) and the use of computerized geographical information systems, the importance of military geography declined in the West, and the military institutions preferred to focus on other subjects such as geopolitics, geostrategic and political geography. Still, it remained particularly important in the Asian countries, like Japan, China, Korea and Indonesia.

Today, western countries show a great interest in military geography. In Russia, Putin has established military schools for both males and females. The comeback of military geography

to the military scene is caused mainly by the World Wars that have actually proven the need for accurate knowledge about the physical geography of the battlefield. Also, colonial wars have shown the need to know the environments in which their military forces are fighting and thus to confront them in terms of health, epidemics or beliefs.

The scope of military geography

According to Anderson (1993), military geography began to be considered as a recognizable study in the middle of 19th century. It was considered as a sub-discipline of geography that interprets geographical information for the military commanders who use it to accomplish their missions. Consequently, military geography contributes to military intelligence, which was considered by Jackman (1962) as “digested or processed information of many sorts, among which are the products of the military geographer”. Jackman (1962) described the relationship between military geography and military intelligence as a spectrum: “military geography [...] blends into military intelligence as in a spectrum”. Raw geographical information is combined with materials from other sources and put through the military intelligence mill to produce the intelligence estimate.

Geographical information contributes to prepare an intelligence estimate either for military activities or military support activities. In other terms, military geography helps in setting appropriate war strategies and battlefield tactics from one hand, and in smoothing logistical operations from the other.

As war can take place on land, air or water surfaces, military geography considers geographical characteristics of each of these mediums. For land warfare, military geography identifies natural obstacles such as mountains, valleys, river ways and climate (variation in temperature, rain density, snowfall time and thickness). On the battlefield, information are required about the color of the soil for camouflage purposes, the topographic structure of the surface (existence of corridors in mountain areas, high hills and peaks, stalemates, expected avalanches), climate conditions' variability with altitude, sun path^{iv} and day arc, etc. (Bellamy, 1987). Also, an appraisal of communications and transportation means and nodes is needed to ensure rapid mobility of troops and supply of equipment and food.

To that, the attack of a city must be preceded by a thorough knowledge about its urban design (circular, radial, rectangular, square or grid model), its divisions (industrial zones, military centers, transport system, etc.) and its surroundings (forests, mountains, rivers, agricultural zone, etc). Based on, strategic military plans should be set.

For sea combats, Moineville (1983) indicates that knowing the characteristics of water bodies is highly important in military operations as marine currents can be useful for navies sailing along their direction and harmful if sailing against them^v. Information about climatic conditions is also important as they influence water status (rising sea waves, hurricanes, tides). Moreover, military geography helps identify obstacles affecting marine navigation such as icebergs and coral reefs. It informs as well about the coasts and their forms, the straights and channels, the strategic sea lanes to be followed and the suitable places to establish a port for warships.

As for air wars, Brown (1986) considered that the control of air space necessitates primarily information about weather conditions, air turbulences and jet streams as they influence to a large extent the safety of takeoff and landing, as well as airdrops and military parachuting (paratroopers).

Weather conditions affect visibility by disturbing the transparency of the air. In fact, fog, rain, dust and winds limit air operations. Winds, lightning and thunder in particular can decrease the effectiveness of radars and air communication equipment.

Another important issue for air warfare concerns airfields, and Geography can provide a great help in the selection of their locations so that they do not hinder military aviation, rather they ensure a high visibility.

Through the study of theater of war, military geography guide commandants towards the best options for the use of the armed forces. This guidance happens at both strategic and operational level (Laurentiu, 2014). Military geography examines the elements of a place and mobilizes them in favor of military operations.

From military geography to military geographies

In 1899, Maguire defined military geography as “the application of topographical and environmental knowledge to the conduct of military campaigns, and the strategic and tactical considerations to be taken into account”. This “terrain and tactics approach” (Woodward, 2015) has been resumed in 1966 by Peltier and Percy with a strong involvement of the human dimension: “Military geography [...] focuses on [...] the effect of the location, characteristics, and distribution of environments, peoples, forces, and things upon military activities and thus ultimately upon command decisions”. In turn, Thompson and Grubbs (1998) stressed on the importance of sociocultural knowledge in military operations.

Another definitional approach highlighted the role of military geography in solving military problems. In this vein, Jackman (1962) defined military geography as “the application of geographical principles and knowledge to the solution of military problems”. Likewise, Palka and Galgano (2000) considered that military geography is “the application of geographic information, tools, and techniques to military problems”. Military geography is thus seen as an applied discipline. Indeed, Beck (2003) pointed out to the importance of Geographical Information System (GIS) and remote sensing in defense and operations.

The two approaches favor a military geography that is underpinned either by guaranteeing the efficiency of military activities or by setting up the solution of military problems. Both constitute military objectives for a country or state.

This classical vision of military geography has been enlarged in the past decade to enclose a plurality of military-related activities. This has opened up new areas of interest such as the geography of armed conflict, the geography of war and peace, the geography of militarism^{vi} and the geography of military activities. All can be grouped – according to Woodward (2015) – under the title of “military geographies”. Furthermore, the military activities engage places, environments, landscapes, resources, people ... These are geographically expressed and their understanding stipulates a wide approach that combines multiple geographical perspective, hence, the shift toward military geographies.

The critical military geography is no more restricted to military offensive and/or defensive plans. It ensures military power and control over spaces. To do this, military geography solicit a myriad of sub-disciplines of Geography, hence its evolution into military geographies. It is useful to notice here what the French geographer Yves Lacoste claimed in 1976: “la Géographie ça sert d’abord à faire la guerre” (Geography is first of all about war).

Consequently, military geographies gather all sub-disciplines of Geography that have informative, indicative and imperative aspects in defining power relationships.

Military Geography: A basic material of military curricula

Rech et al. (2015) believe that “as an academic discipline, Geography has always been intimately associated with the practice of armed conflict, the deployment of armed forces, and the maintenance of military capabilities”. Whether to dominate or to defend a territory, geographical knowledge and geographical techniques are needed. Thus, Geography represents an important subject of military studies.

Military studies are usually provided in military academies. The first military institutions rose up in Europe in the Eighteenth century. They were “specialized schools designed to educate engineers and artillerymen [...] such as those of the Netherlands (founded 1735) and the French school at Mezieres (founded 1744)” (Edney, 1994). Later, military academies were found for infantry and cavalry officers such as the French Ecole Royale Militaire (1752) and the Royal Military Academy at Woolwich – Britain (1799). In the USA, the Military Academy at West point (New York) was established in 1802.

In his “Origins of Military thought”, Gat (1989) claimed that military curricula during the 18th century emphasized “on the study of Geometry and Geography and on their application to the art of war”. Cartography was also a main subject as declared by Edney (1994): “For those eighteenth-century officers [...] the essence of military science was Geometry, Geography, and their point of contact: Mapping”. The importance of Geography as a principal discipline in military studies has been discussed as well by the Prussian General Clausewitz^{vii}, who devoted a chapter entitled “Geography and Ground” in his book “On War” to emphasize on the insights that geographical information can bring for military operations.

In the nineteenth century, most of European military academies reshaped their curricula and integrated military geography. This was not the case in US military academies where “there was no formal demand for military geography until World War I” (Palka, 1995). During World Wars I and II, American geographers supported the military forces by providing geographical data about battlefields. Although they were wartime geographers in charge of collecting and processing data to solve military problems, their contribution stimulated the incorporation of military geography in military studies, whether to commanders and planners or Research and Development (R&D) teams responsible for developing military uniforms, vehicles and equipment. Yet, the interest in military geography declined in the 1970(s) in both university geography programs and military academies curricula. Actually, Palka (1995) revealed that the Cold War has blurred the “boundaries between political geography, military geography, and military intelligence” and that military geography was frequently “merged with political geography at one end of the spectrum, and overlapped with military intelligence at the other end”.

According to Anderson (1993), the end of the Cold War provided an opportunity to revive military geography in the USA. Its scope was enlarged to include military related geographies, but also to consider technological advancements (computer assisted cartography, GPS, GIS, aerial photography...), new challenges and the world’s balance of power.

The flourish of military geography hasn’t been limited to Europe and U.S.A; it has also been remarkable in South Africa. Actually, Visser (as cited in Smit, 2009) indicated that South

African Military Academy introduced military geography as a course subject in its curricula in 1958 after recognizing the importance of its education to military students. Jacobs et al. (2002) argued that the major learning objective of military geography at this faculty was to understand the “man-environment interaction and its influence on military planning and activities”. This means that the curriculum of military geography was wide enough to enable student officers to take geographically informed decisions. Indeed, Smit (2009), who studied the environmental attitude of military geography students at the South African Military Academy, reported that military geography’s curriculum “focused mainly on map work, physical, political, economic, urban and regional geography”. He argued that new modules have been integrated to the curriculum by the end of the twentieth century, particularly Global Information System (GIS) and remote sensing.

This literature review allows retaining that military geography is a mandatory discipline in military studies. Its importance has motivated academic researchers in both military and human sciences. As a result, military geography has evolved to enclose a set of military-related geographies and technology-based geographies such as remote sensing and computerized information systems. The education of military geographies in military academies has strategic purposes, particularly with the new role assigned to military forces. This role focuses on Military Operations Other Than War (MOOTW) (Palka, 1995), thus involves military forces in humanitarian, environmentalist and peace making issues.

Research Questions, Hypotheses And Methodological Plan

This research aims at highlighting the importance of teaching military geography(ies) to student officers at the Lebanese Military Faculty. It is interesting to understand how a country, located in the turbulent Middle East region, bordering two “hot” countries: the destabilized Syria and the ambitious “Israel”, witnessing internal political dissidences, hosting a huge number of Palestinian and Syrian refugees and weakened by a 15 years’ civil war, train its military officers.

This context imposes a greater attention to military geography in the curricula of the Military Faculty, or rather military geographies that encompass a number of military useful sub-disciplines of Geography. Hence, the main question of this research is: to what extent the curriculum of Geography at the Lebanese Military Faculty is adapted to Lebanon’s internal and external challenges? In other terms, till what extent this curriculum takes into consideration the multidimensional approach of geography in military studies?

This question raises many interrogations in light of the problematic of this research (cf. section 2), e.g. how important is military geography in the curricula of the Lebanese Military Faculty? What is the syllabus of Geography in each of the three year of study? Who decide the content of the courses’ materials? And why teaching hours have been reduced in the 2012’s reform?

As answers to these questions, three hypotheses are advanced:

The first hypothesis refers to the Law 163 of 17 August 2011 related to the administrative, organizational and operational system of the Military Faculty in Lebanon, to consider that the curriculum of Geography is compatible with the expected missions of the Lebanese military forces. Or, Lebanon’s Arab foreign policy is based on the principle of neutralism regarding inter-Arab conflicts, i.e. non alignment and non-participation in the military blocs. Therefore, the country is strictly concerned with its own security and the expected role of the Lebanese

army is defensive. Accordingly, the focus of the curriculum will be on the national level. Hence, “Geography of Lebanon” is a mandatory course of Geography’s curriculum at the Military Faculty.

The second hypothesis builds upon the cooperation between the Military Faculty and the Lebanese University that resulted in a delegation of Lebanese University’s professors to teach general sciences’ materials at the Military Faculty. Or, these professors are supposed to be active researchers in their fields so they constantly update (or propose to update) their syllabi. Hence, the new concept of military geographies should be considered in the curriculum of Geography at the Lebanese Military Faculty.

The third hypothesis evokes the educational system of the Military Faculty which provide all student officers the same education for general sciences, regardless of their specialty (Internal Security, General Security, Navy forces, etc.), to suggest a diversified curriculum of Geography that encompasses economic, social, cultural, environmental, urban, rural and other areas of study for Geography.

As this research is of a qualitative type, the three above hypotheses express cause-and-effect relationships. Therefore, testing their validity necessitates appropriate methodological choices that conform to the constructivist and positivistic attitudes adopted in this research, as well as to its deductive approach.

For its methodological part, this research articulates three methods: descriptive, exploratory and explanatory. As a qualitative research, it relies on the case study strategy to analyze its object of interest i.e. the curriculum of geography at the Lebanese Military Faculty. It is a cross-sectional research, meaning that it focuses on a specific time period that starts at 1/1/2010 and ends at 1/1/2018. The choice of this period is done in a way to identify changes in the curriculum of Geography induced by the 2012’s turnaround of curricula at the Military Faculty.

The methodological plan calls both primary and secondary data. Collection of primary data was based on observation. This was facilitated by my mission at the Military Faculty as a lecturer of Geography since 2012. Observing from inside allowed me to gather relevant data concerning the curricula of the Military Faculty, the syllabi of Geography, the teaching tools and the students’ feedbacks. As for secondary data, it consisted mainly of archived data related to the curriculum of Geography and its course materials that go back to the year 2010.

Data analysis relies on a comparison between the “old” and the “new” curriculum of Geography to analyze how the Lebanese military institution views a discipline that sits in-between military and general sciences.

FINDINGS AND ANALYSIS

New Law – new curricula

The new curricula were accredited formally at the Military Faculty in 2012. It was induced by the Law 163 of 17 August 2011 which is considered as a step toward the integration of the Military Faculty in the Lebanese LMD education system. This Law set the terms of cooperation between the Military Faculty and the Lebanese University and called for curricula that enable student officers to validate their courses at the Lebanese University. The application of this

Law didn't affect the traditional division of sciences at the Military Faculty into two categories: military and general sciences. Nevertheless, its impacts were influential at the general sciences level which were classified in turn into three headings: Exact sciences, Human sciences and Linguistics. The curricula of these general sciences vary from year to year. For the first year of study, it is composed of 13 materials and then decreases slightly for the second year to reach 12 materials, and to 11 for the third year. In parallel, military sciences curricula includes 24, 38 and 24 materials for the first, second and third year respectively. This means that military sciences are accorded greater importance than general sciences from one hand and that their materials are wide-ranging.

Table 1: General sciences versus military sciences at the Lebanese Military Faculty – number of materials included in each category

	General Sciences (numbers of materials)	Military Sciences (numbers of materials)	Ratio (Military sciences materials /General sciences materials)
1 st Year	13	24	1.8
2 nd year	12	38	3.1
3 rd year	11	24	2.2

(Source: Author, 2018 based on primary collected data)

Concerning general sciences, the progressive decrease in materials relate to Linguistics which include Arabic, French and English. Exact sciences include Mathematics, Physics, Chemistry, Statistics and IT (data processing). Human Sciences include History, Geography, Civic Education, Sociology and Laws. These are the main courses taught alternately under general sciences category during the three years of study at the Military Faculty, with variations in levels from one year to another. Based on, Geography is considered a Human Sciences discipline, in line with the vision of the Lebanese University which offers Geography as a specialty of the Faculty of Human Sciences.

It is noticeable that only Exact Sciences' materials have been reformulated in light of the syllabi approved at the Faculty of Sciences at the Lebanese University. As for Human Sciences, coordinators were first asked to propose new course materials that match with the Lebanese University ones. But this task was not feasible as Human Sciences are of different nature, they are topic-based rather than level based. Thus, coordinators suggested topics that are meaningful for military studies and related to the Lebanese context. For Geography, three topics were selected and validated by the Faculty's administration: "Geography of Lebanon", "Geography of the Arab World" and a collection of geographical topics grouped under "Geography".

Geography: A reshaped curriculum

Before 2012, the curriculum of Geography at the Military Faculty was diversified and condensed at the same time. For the first year, the syllabus is composed of two parts: natural (physical) geography and human geography. Each part contains a set of related chapters. For the second year, the syllabus is also structured around two parts: Geography of Lebanon and Geography of the Arab World. As for the third year, the syllabus encompasses some subjects of interest for Geography from one hand, and some contemporary national and regional issues presented from a geographical perspective from the other.

The below table presents the syllabi of Geography for the three years of study at the Military School (before 2012).

Table 2: The curriculum of Geography for the three year of education at the Lebanese Military School before 2010

Year of study	Syllabus of Geography at the Military School
1 st year (29 hrs)	<p><u>Course title:</u> Geography</p> <p>I- Physical Geography</p> <ul style="list-style-type: none"> - Dynamic of the Earth - Structure of the Earth - Distribution of tectonics plates and formation of mountains and oceans - Earthquakes and Volcanoes - Earth atmosphere - Atmospheric pressure and Winds - Climatic zones and their impacts on human life <p>II- Human Geography</p> <ul style="list-style-type: none"> - Demographics - Natural Growth Rate: types, impacts and factors influencing it - Displacement and migration - Public policies to face displacement and migration - Energy - New World Order and the Economic and Political Powers - Global North and Global South
2 nd year (26 hrs)	<p><u>Course title:</u> Geography</p> <p>I- Geography of Lebanon</p> <ul style="list-style-type: none"> - Location of Lebanon and its geological and topographic formations - Climate of Lebanon and its water resources - Economic study of the Lebanese regions - The development of the Lebanese Economy <p>II- The Arab World</p> <ul style="list-style-type: none"> - Natural characteristics of the Arab World - The problems of water and oil in the Arab World and their economic and political importance - The Arab economy: Agriculture and Industry - Arab Economic Integration
3 rd year (22 hrs)	<p><u>Course title:</u> Geography</p> <ul style="list-style-type: none"> - Political Geography - The Middle East: its concept and the problem of water - The importance of transportation and telecommunications in the world - The environment: the factors of its pollution and the ways to protect it - Urban areas: its social and political problems, and the proposed solutions - The Euro-Med partnership and its impacts on Lebanon

(Source: Author, 2018 based on archived data)

A rapid look into this curriculum reveals that military geography was not considered in the course materials of Geography for the first and second years of education. For the third year, some topics that falls under military geographies are tackled such as political geography and the Middle East issue. This is because the curriculum of the first and second years has been set in the 1970(s) and has not been changed since that time, contrarily to the one of the third year that witnessed a complete revision in the late 90(s).

The study of this curriculum shows that it presents Geography as a “set of pieces” without a conductive thread that harmonizes them. As for the teaching objectives, it is clear that selected topics do not reflect the applied side of Geography. Actually, confining Geography to categories (1st year), regions (2nd year) or unrelated subjects (3rd year) reveals an underestimate of its role in the military studies. Besides, cartography was not noticed in the curriculum of Geography. It was a material of military sciences presented under the title of “Reading of maps” and taught by senior military officers.

In 2012, the syllabi of geography were restructured by the professors of Geography upon the request of the Faculty’s administration. As by the Faculty’s new curricula, Geography was classified under Human Sciences category and the number of hours granted for its teaching dropped to 20 hours for the first and second year. This new curriculum introduces some aspects of military geographies for the first year, while it focuses on the Geography of the Arab World in the second year and the Geography of Lebanon in the third year.

The below table presents the curriculum of Geography for the three years of study at the Military Faculty (since 2012).

Table 3: The current curriculum of Geography for the three year of education at the Lebanese Military Faculty

Year of study	Syllabus of Geography at the Military Faculty
1 st year (20 hrs)	<p><u>Corse title:</u> Geography</p> <ul style="list-style-type: none"> - World political map - Political Geography and Geopolitics - The State: concept, elements, strengths and weaknesses of its natural structure - Military Geography (1): concept, importance and domains - Military Geography (2): related concepts (strategy, tactics and geostrategic) - Areas of conflict in the world: Geographic factors (borders, islands, territorial waters, natural resources) - Globalization: concept, drives, advantages and disadvantages - Geography of transportation and telecommunication (water, air and land transport) - The environmental cycle: concepts related to the environment (ecosystem, food chain, environmental disorders), pollution (concept, types and risks) - Geography of energy and alternative energy: sources and types of energy, areas of production and consumption, concept and importance of alternative energy.

2 nd year (20 hrs)	<p><u>Corse title:</u> Geography of the Arab World</p> <ul style="list-style-type: none"> - Introduction to the Geography of the Arab World: political, natural and geological maps; topography of the Arab World - Elements of the Arab World: <ul style="list-style-type: none"> * Human elements (Demographics, characteristics of the population, displacement and immigration, case studies) * Natural elements (location, climate and water) - The Economy of the Arab World (economic systems, economic structure and contribution of each sector in the GDP) - Agriculture and Food security in the Arab World - Industry in the Arab World (1): importance, types and potentials - Industry in the Arab World (2): repartition of minerals and energy resources - Services in the Arab World: Tourism (main attractions, number of tourists, negative and positive impacts), trade (international and domestic trade) - Development in the Arab World: concept of development and tools of implementation, activation of the Arab women role. - Arab economic integration (definition, importance, potentials, challenges and institutions)
3 rd year (22 hrs)	<p><u>Corse title:</u> Geography of Lebanon</p> <ul style="list-style-type: none"> - Introduction to Geography of Lebanon (map of natural Lebanon, topographical structure) - Elements of Lebanon <ul style="list-style-type: none"> * Human elements: Demographics, characteristics of the population, natural growth, illiteracy, poverty, Human Development Index, migration of the population (displacement and immigration, imbalance in the scattering of population between rural and urban areas) * Natural elements: Location, climate (diversity, importance), water, forest and minerals, oil and gas - The Lebanese economy: characteristics, weaknesses (structural problems, problem of debts and corruption, problems of the agricultural, industrial and tertiary sectors) - The development in Lebanon: definition of the balanced development and sustainable development - Human development in Lebanon: role of the public and private sectors - Economic development in Lebanon: role of the public and private sectors - Preservation of the environment in Lebanon: environmental problems and solutions

(Source: Author, 2018 based on primary collected data)

The analysis of the current curriculum reveals that military geography is directly integrated in the course materials of the first year of study. Actually, two chapters are dedicated to teach its concept, importance, fields (air, water and land) as well as the concepts related to it such as strategy, tactics and geostrategic. These two chapters correspond to four hours of teaching so 20% of the course time is consecrated to the education of military geography. As for the other topics, five out of seven chapters explain issues and aspects related to military geographies (World political map, political geography and Geopolitics, the State, areas of conflict in the world and Globalization). Or, seven chapters correspond to 10 hours, thus the total time

allocated to the education of military related geographies (including military geography) is 14 hours, i.e. 70%.

For the second year, the focus is on the Geography of the Arab World, a region to which belongs Lebanon culturally and geographically. Although this course material was offered in the previous curriculum, it has been developed to include geological, topographic, political and natural characteristics of this Lebanon's surrounding area, in other terms geographical knowledge that has a military intelligence prospect. Indeed, this information is of importance for Lebanese military officers, particularly that this neighboring region is witnessing a geopolitical turmoil that could affect Lebanon.

For the third year, the rationale for focusing on the Geography of Lebanon has a double face: first student officers should know the characteristics of their country so to defend it properly, second they should know the challenges (economic, social, political, environmental, urban, rural, etc.) and the internal encounters (refugees, poverty, cultivation of drogues, etc.) that threaten the country so to deal with them efficiently. Or, this is essential in military geographies as today's military roles are centered on Military Operations Other Than War (MOOT).

The comparison between the previous and current curriculum of Geography reveals a huge change in the design, content and teaching objectives. Actually, aspects of military geographies have been introduced directly in the first year, aspects of Arab World geography favoring military intelligence has been the object of study for the second year, and a deep geographical analysis of Lebanon in line with MOOT principles for the third year.

Military geographies: caught between general and military sciences

In general, military sciences include a range of martial arts. Yet, at the Lebanese Military Faculty, the curriculum of military sciences is exhaustive. Beside martial arts, military planning, techniques and equipment, it includes physical and psychological exercises, Hebrew, and some geography-based materials such as reading of maps, topography and GIS.

For reading of maps, 84 hours are devoted to this course material at the first year of study and 54 hours for the second year. A total of 138 hours which represents more than the double of time granted for the education of Geography during three years. This means that Cartography is viewed as self-discipline from one side, and is considered of great importance in military sciences from the other. Instructors are military officers designated by the Directorate of Geographic Affairs, a satellite institution of the Lebanese army.

Concerning topography, 30 hours are accorded to its teaching for the second year of study (almost half of the time given to teaching Geography for the three year). Similarly, senior military officers teach this course and emphasize on its applied side.

As for GIS, this course has been introduced recently under the form of a 20 hours' workshop. This shows that the administration of the Faculty is aware about the necessity to cope with technological advancements particularly those favoring military intelligence.

Table 4: number of hours granted to three military geographies' materials classified under military sciences at the Military Faculty

	Reading of maps	Topography	GIS
1 st year	84	-	-
2 nd year	54	30	16
3 rd year	-	-	-

(Source: Author, 2018 based on primary collected data)

Although the curriculum of Geography include reading of maps and analysis of topographic aspects for Lebanon and the Arab world, these military related forms of geography are granted specific attention and considered as military sciences. Therefore, there is a different vision of military geography at the Lebanese Military Faculty that separates between its theoretical and applied sides. The applied materials are confined to military studies, while the theoretical ones to general sciences.

The categorization of Geography under Human sciences at the Lebanese Military Faculty and the reduction of time allocated to its course materials, resulted in a curriculum that focuses on the basic geographical knowledge a Lebanese officer should know. The “advanced” geographical knowledge are categorized under military sciences and granted much more time and attention.

The findings of this research reveal that the Military Faculty command and the professorial team of Geography are aware of the evolution of military geography to military geographies and the new role assigned to military forces (MOOTW). They are integrating military geographies in the Faculty's curricula, but in respect to its terms of classification of materials under general or military sciences. As a result, military geographies are scattered between the two categories, its theoretical part is taught by geographers, while the education of its applied side is conferred to senior officers.

CONCLUSION

In 2012, the Lebanese Military Faculty updated its curricula in a way to conform to the expected missions of the Lebanese army. This has resulted in the integration of military geographies in the curricula (validation of the second hypothesis) but in a specific formula: applied aspects of military geographies are joined to military sciences, while its theoretical aspects are annexed to Human Sciences.

For military geographies as Human Sciences, the focus is on the Geography of Lebanon (validation of first hypothesis) in a larger geographical content that presents urban, rural, economic, environmental, and other dimensions of Geography (validation of the third hypothesis).

It's noticeable that Hebrew has been integrated into the curricula because it is the language of Lebanon's enemy. Indeed, “know your enemy” is one of the basics in the art of war. Yet, this should not be restricted to language. The geography of occupied Palestine should be mastered by the Lebanese army officers, thus taken seriously into consideration in the curricula of the Lebanese Military Faculty.

This research has shown that military geography is an important course material in military studies and that its concept has evolved to enclose types of geographies connected to military intelligence. This means that the military academies should take into consideration military geographies when training their officers. The study of the Lebanese Military Faculty case demonstrated that its curricula do consider military geographies but in a specific way. It is shared between human and military sciences, with the applied disciplines being confined to military sciences and cognitive ones to human sciences. This model of fragmenting military geographies' materials and assigning its education to instructors coming from different background, needs further investigation to see if it is affecting the perception of Geography in students' minds.

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ⁱ A state considered by Lebanon and many Arab countries as illegitimate and usurping entity.

ⁱⁱ An Athenian historian and author of the “History of the Peloponnesian War” between Athens and Sparta (431 – 404 B.C).

ⁱⁱⁱ A Greek geographer, philosopher, and historian lived in during the transitional period of the Roman Republic into the Roman Empire

^{iv} During October 1973’s war, the Egyptian army started the attacks of the Bar Lev line in the afternoon, a time where the position of the sun in the sky does not bother the advancement of the troops, because its rays fall at their backs, not their faces.

^v German submarines took advantage from the lower marine current in the Strait of Gibraltar that circulates from the Mediterranean to the Atlantic to move without running their engine, thus avoiding the hostile English sonar at that time.

^{vi} Militarism denotes the extension of military influence into civilian social, political and economic spheres (Thee, 1980).

^{vii} A Prussian General, military thinker and head of the Military Academy at Berlin (1818–30). He died before finishing his book “On War” which was published later by his wife.