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METHOD FOR THE ANALYSIS OF GEOPOLITICAL REGIONS (MARG)

Abstract

The end of the Cold War pushed to a second plane the conventional deterrence strategies among countries, behind the strategies to address highly changing multifaceted risks and threats which often have non-state actors as protagonists, capable of destabilizing geopolitical regions, which force the international community to intervene to avoid contagion. Thus, the author sets forth the need to develop a method to analyze geopolitical regions, starting from the hypothesis that none of the existing methods is valid for this type of analysis. Once the hypothesis is established, the author creates a method of analysis of geopolitical regions, and validates it by means of an empirical investigation.

KeyWords

Geopolitical analysis, geopolitical region, indicators, comparison of risks.

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I. INTRODUCTION. APPROACH TO THE INVESTIGATION

With globalization, national and international security increases its interrelationship, so that the analysis of the risks and threats of a country, affect the stability of its whole geopolitical region. Therefore, for example, the conflict in Libya is a destabilizing factor for the entire region. The same can be said of Syria or of Somalia. This requires a method of analysis of stabilities and instabilities of political regions that allows the adoption of policies and strategies capable of managing the crises before they reach the degree of war.

The Dictionary of the *Real Academia Española* (Royal Academy of the Spanish Language) defines Geopolitics as “*the science that intends to base national and international politics in the systematic study of the geographic, economic, and racial factors*”.¹ The Word “racial” appears in this definition to make clear the meaning that geopolitics had in the decade of the thirties under the influence of the Munich School (Germany) and the evil use by Nazism, which banned it as an academic discipline; however it was used as a tool by the powers with regional or global geopolitical interests. Authors such as Spycman, Kissinger, Cohen, Brzezinski, Paul Kennedy, Hervé Coutau-Bégarie, Pierre Celerier, Huntington, Fukuyama, etc., show that geopolitics has always been present in the analysis of the international relations of the major powers.

The Army Staff College defined Geopolitics as: “*The science that pursues the definition of national or international politics based on the systematic analysis of the geographic scenario, and of other factors such as the economic, human, sociopolitical and military*”.

Geopolitics serves to analyze the scenario in which it must carry out its scope. Its objective is to improve making political decisions, providing all the information to facilitate the work of decision makers.

The Intelligence Agencies and the Staff Colleges of the developed countries usually employ analysis methods based on geopolitics.

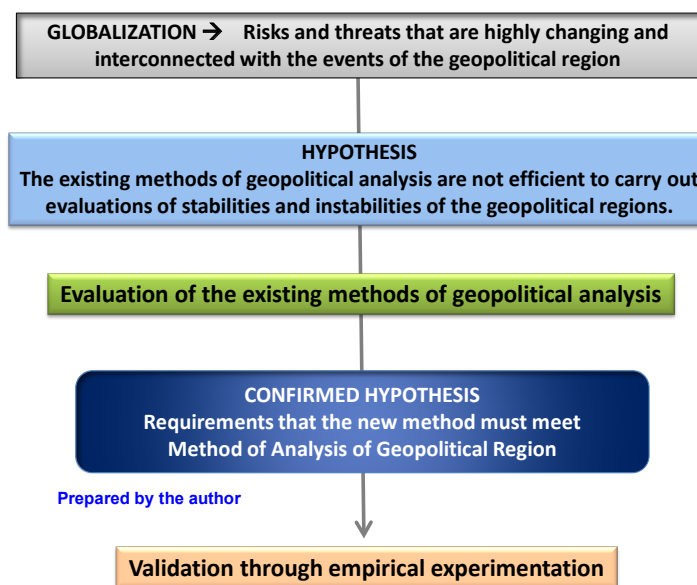
On the other hand, the speed at which risks and threats associated to one or various geopolitical regions change, requires a continuous method of assessment based on the

¹ ROYAL ACADEMY OF THE SPANISH LANGUAGE. Dictionary of the Spanish Language, Ed. Espasa Calpe, 21st edition. Madrid, 1992, p. 1036.

stability indicators of every geopolitical region. Considering “geopolitical region” as *“A group of States which, from the point of view of geopolitical study, present a certain unity or integration, be it physical, human, economic, political, etc., which renders the actions in each of its parts closely related to the effects on the others”*.

On the basis of the knowledge of the different methods that may be useful to carry out the mentioned assessment of geopolitical regions, we have set forth the following hypothesis for research: *“there is no method of analysis of geopolitical regions, capable of analyzing the stabilities and instabilities that allow us to manage crises”*.

Once the veracity of the hypothesis proposed is confirmed, we will develop a method to analyze the instabilities of the geopolitical regions on the basis of the knowledge of the existing methods that best adapt to our needs.



GRAPHIC 1

After developing the new Method of Analysis of Geopolitical Regions, its appropriateness for the proposed objectives must be validated.

The professors of the Department of Strategy and International Relations at the former Army General Staff College in Spain elaborated a method of analysis called Geographic-military Method, particularly designed to study a country on the basis of its physical, demographic, economic, socio-political and military factors. The method focused on evaluating whether the armed forces of the country studied were adequate for the threats in its geopolitical environment, especially in neighboring countries. It was a useful method in the Cold War environment, where the deterrence strategy against conventional threats was predominant, such as those which had sparked the two World Wars.

Nonetheless, with the end of the Cold War, the conventional deterrence policy among states had lost its prominence. Meanwhile, non-state actors have progressively appeared, such as international terrorist groups, which present great challenges to security from far off geopolitical regions like Afghanistan, Syria or the Sahel. Risks and threats of a diffuse and changing nature, which are capable of destabilizing entire geopolitical regions, force the international community to intervene to avoid the contagion of destabilization. Thus, the geographic military method loses a great deal of its usefulness. This was the reason the author, as professor and Chief of the Department of Strategy at the Superior College of the Armed Forces (*ESFAS-Escuela Superior de las Fuerzas Armadas*), decided to adapt the geographic-military method, and designed a new method that was useful to evaluate the stability and instability factors of a geopolitical region, and not solely of a country.

This new method should allow the detection of possible instabilities in a geopolitical region, and with enough time to address them in its crisis stage to avoid the escalation of instability into a conflict, and even a war with disastrous consequences and difficult to control. Even so, the method should facilitate making strategic political decisions.

2. CURRENT METHODS OF GEOPOLITICAL ANALYSIS

To verify that there is no method of analysis of geopolitical regions able to analyze the stabilities and instabilities, we have analyzed all existing geopolitical methods or their equivalents that could be useful.

After studying the methods of geopolitical analyses in the Staff Colleges of the main Western countries, we concluded that the best starting point was to go through the different methods gathered by Hartshorne and by Cohen, that we could define as geopolitical.

Hartshorne acknowledges four different methods within the field of geographic politics: 1) analysis of power; 2) historical; 3) morphological; and 4) functional.² Cohen³ added two other methods: behavioral and systematic. To all these methods, we will add the geopolitical reasoning method, examined in the geopolitical manual of the Army of El Salvador, the Thual geopolitical method, the method of the French Institute of Peace and Conflict Studies, the method of the Spanish Institute of Strategic Studies

2 HARTSHORNE, Richard. *Political geography* en HARTSHORNE, Richard, PRESTON, J; y CLARENCE, J. (cords.). *American Geography Inventory and prospect*, Syracuse: Ed. Association of American Geographers, University Press, Syracuse, 1954, pp. 167-223.

3 COHEN, Saul Bernard. *Geografía y política en un mundo dividido*, Translated from *Geography and politics in a world divided* by Ricardo Español Iglesias, Ed. Ejército, Madrid, 1980, p. 41.

and the factorial analytical method. Thus, making a journey through all the methods currently available.

For his part, the classification of the methods for the study of the political geography designed by Saul Bernard Cohen⁴ allowed the development of the military geopolitical method as one of the possible options offered by the methods of analysis of power.

2.1. Analysis of power method

The analysis of power method refers to what Hartshorne considers “an analysis of political units of power and the relationship among them”. The method divides national power into five elements for analysis: geographic, economic, political, social, and military. Within this scope, Cohen makes clear that: “*While the inventory of power is, in general terms, a method of comparative analysis that has been reserved for a nation-state, it is increasingly important to examine the possibility of its application to various levels of regionalization, and include the growth or speed of development rates to ensure that the dynamics of the areas is reflected in any study undertaken*”.⁵

The analysis of power method has the drawback that it is difficult to quantify aspects of great influence such as the political and moral ideologies, the social awareness or the degree of cohesion of a people. On the other hand, the choice and weighting of the data is not an easy task. Thus, it is important to discover what elements are related and which ones may benefit the study. The final results contribute guidelines that may be useful for any comparative analysis.⁶

2.1.1. Historical method

The historical method considers that the historical political geography may contribute with a better knowledge of the current problems. According to this method, what is happening now can only be understood keeping in mind that the present is a consequence of the past.

4 COHEN, Samuel. North American, former President of the Association of Geographers of the US., Author of the Theory of the Hierarchy of Spaces in the World.

5 Ibidem. p.45.

6 COHEN, Saul Bernard. Opus cit., p.48.

A good example of this is the study by Whittlesey which analyzes the evolution of the French national state.⁷

Continuous change makes the application of a method based on historical facts difficult. Trusting history, and for it to serve us as a guide to plan political missions and activities of states in the present may result fruitless and, even deceitful.⁸

In this type of method we may include the so-called geopolitical appreciation, which considers that such an appreciation is the tool for the researcher to have the capability to assess transcendental historical facts to interpret the present. In the *Geopolitics Manual*⁹ of the Army of El Salvador, Geopolitical Appreciation defined general conclusions as “the mental process carried out to study the geopolitical influences in a given case, permitting their evaluation, determining their actions, and deducing the measures of political leadership which, from the point of view of these influences, should be adopted”. Thus, Geopolitical Appreciation¹⁰ is a document with general conclusions that could serve as the basis for any political strategy, and should be based on contributions from a multi-discipline team of experts in Economics, Politics, Sociology, Law, Military issues, etc.

The method does not give a solution to each problem, but rather, it provides general ideas, tendencies, and orientation; therefore, it is useful for the high-level decision-makers to establish the geopolitical objectives.

2.1.2. Morphological method

This method studies the different political aspects, based on its similarities and differences with other models, in accordance with its characteristics and structural forms. On the other hand, it analyzes political structures and associations that may be internal administrative departments of a nation or nation-states, regional blocs or global organizations, considering its location, size and shape.

On the other hand, this method is more thorough when it is based on the prospective technique, developed by the astronomer F. Zwicky, which follows five basic steps:

7 WHITTLESEY, Derwent (1944). *The Earth and the State*. Henry Holt, Nueva York, 1944, pp. 129-165.

8 COHEN, Saul Bernard (1980). *Op.cit.*, p.48.

9 MILITARY DOCTRINE AND EDUCATION COMMAND OF THE ARMY OF EL SALVADOR. *Geopolitics Manual* MD 100-8, San Salvador, March, 1998, p. 284.

10 *Ibidem* p. 285.

Clear and precise definition of the country, as well as the focus of the analysis to be performed, to proceed to do an adequate and correct formulation. It requires an identification of all the parameters or factors characteristic of the country, through variables and the issue to be analyzed.

Construction of the morphological box which must consider all the parameters identified through variables in the second step.

All the scenarios of the morphological box which must be examined in terms of their viability to reach the aims sought.

To undertake a morphological study of a country, one deals with the evolutions of its economic, social, political, and legal parameters within a period of time, and always in light of significant changes that have arisen in the entire geopolitical region. Following, the method elaborates a multidimensional morphological box in a double entry table, to ease the identification of the possible scenarios.

The method adapts itself well to the study of a country, but not to that of a geopolitical region made up of several countries.

2.1.3. Functional method

The functional method was conceived by Hartshorne,¹¹ and is based on the analysis and functioning of an area as a political unit. It is an exclusively political approach to a geographic space created as an area of political interest. The method subdivides the political area into subordinate areas, establishing the political relation with the whole, and the different political links among each one of the subordinate areas and of the whole with the outside.

This method is geared to the study of a State and the regions into which it subdivides. The subordinate areas should have a stronger relation with the whole than what they have between each other or among other States, because for the State to function adequately, it must be bound by homogeneity, coherence, and feasibility granted by its strength. The feasibility of any State also depends on its internal cohesion, and on the economic, strategic, and political relations with other States.

The functional method studies the centripetal forces that bind and consolidate the State, and the centrifugal forces that weaken it.

¹¹ HARTSHORNE, Richard. *The functional approach in political geography*, Annals of the Association of American geographers, XL, June, 1950.

These forces are related to the space where they occur. The method provides a political analysis of the spatial distribution of power, the relations among different political agents, and their consequences.¹²

The application of the functional method would allow us to analyze the conflicts that arise among the different administrations, discovering and assessing the tensions that surface between the central state when carrying out its particular functions, and the regional or local organisms. Saul Bernard Cohen applies it to the case of the US.¹³

The application of the functional method assumes a common political or economic organization; thus, we can observe that it requires the existence in the area of a sole regional organization that groups the states in the area, and allows the substitution of the state in the analysis designed by Hartshorne.

Therefore, it is not a method generally valid nor to be applied to the study of an area.

2.1.4. Behavioral method

The political geography of behavior deals with the cases in which space may be identified as an independent variable. Kasperson and Minghi distinguish between the behaviors in space, which refer to the analysis of the spatial models that behavior adopts, and in the territory that refer to innate feelings dealing with the occupation and defense of the physical space. Thus, the behavioral methodology includes the empirical examination of situations by means of appropriate controls, and determines that what we know, feel, and value about space is important to explain our own way to behave.

From this perspective, the behavioral method allows the explanation of different models for the political behavior of societies in a specific geographic area. Nonetheless, the empirical nature of the method, as well as the difficulty to carry out an analysis of collective behavior, hinders the application of this method beyond the purely academic field or in highly controlled areas.

For all these reasons, *this method cannot be applied to the study of an area as a strategic estimation tool.*

¹² COHEN, Saul Bernard. Opus cit, op. cit. p. 51.

¹³ *Ibidem* p. 52.

2.1.5. Systemic method

The systemic method derives from the General Theory of Systems which, as A. Rapoport¹⁴ indicates, is a methodological perspective that intends to study, in a unified manner, several fields previously separate. This theory was developed by Ludwig von Bertalanffy,¹⁵ and it considers that between the classical physical sciences, and biology, as well as between these sciences and other fields of knowledge, there should not be any essential difference regarding methodology.

Nonetheless, the open system concept poses a complex dilemma, which is none other than to define the relations between the environment and the system, as D. Silverman¹⁶ has pointed out. In view of this problem, one must question where each one begins and ends.

In this respect, Cohen,¹⁷ without giving a specific solution to this dilemma, marks an attitude: *“Geographic analyses normally begin and end in and with the place. But the place becomes a geographic entity only when it is examined as part of the earth’s surface, within which certain processes act among each other, especially to create areas of political action. Understanding the dimensions that grant them scale, time, and movement is necessary to evaluate these areas of political action.”*

When speaking of political action areas, in this reflection, Cohen is speaking of open systems that must be defined and limited, in accordance with scale, time, and movement.

In a study by Saul Bernard Cohen and Lewis D. Rosenthal,¹⁸ the geopolitical system was anticipated as the unit within which the political process interacts with the geographic space. Political transactions, political structures, and social forces are the components of the process; while location, area, and landscape are the components of the geographic space.

From this perspective, the use of the analysis of systems in political geography is particularly required, given the application of the theory of systems to the political processes, as is manifested in the works of David Easton and E.R. Leach, according to

14 RAPOPORT, A. *General Theory of the Systems*, International Encyclopedia of Social Sciences, Vol. 9. Ed. Aguilar, Madrid, 1976.

15 BERTALANFFY, Ludwig von. *General System Theory*, Ed. Harmondsworth, Penghin, 1973, p. 16.

16 SILVERMAN, D. *The Theory of organisations*, Heineman, Londres, 1970., p. 27.

17 COHEN, Saul Bernard. Opus cit., p. 211.

18 COHEN, S. y ROSENTHAL, Lewis D. *A Geographical Model for Political Systems Analysis*. The Geographical Review, January 1971, LXI, number 1.

the so-called “*Ad Hoc Committee on Geography*”, of the National Academy of Sciences National Research Council.¹⁹

In this method, as in those previously described, we face the problem of measuring and describing the distribution of political phenomena, such as they exist in space. This poses the problem of trusting static elements to describe essentially dynamic situations.²⁰

Space, as well as the use of it by human beings, is dynamic. The movement factor is particularly important. Thus, Gottmann presented the national movement and ideas as the two main forces in political geography.²¹

In conclusion, we return to Cohen's²² advice which determines that geographic analyses begin and end normally in and with the place. However, the place becomes a geographic entity only when it is examined as part of the earth's surface, within which certain processes act among each other, especially to create areas of political action. Understanding the dimensions that grant them scale, time, and movement is necessary to evaluate these areas of political action.

2.1.6. Geopolitical Reasoning Method

In the already mentioned Manual of Geopolitics of the Army of El Salvador we find the Geopolitical Reasoning Method, about which it points out that “it consists in determining the matter, problem, task, or objective to be solved or reached; to analyze the situation that forms the backdrop to the problem, and to give the solution or possible and feasible solutions.”²³

As far as the different steps to develop the Geopolitical Reasoning Method, the Manual establishes the following:

- a) Identifying the problem, delineating the geographic space which, as opposed to the Appreciation method, starts by identifying the State to be studied.

19 ACKERMAN, Edward A. *The Science of Geography*, Washington: NAS-NRC Publication 1277. Washington, 1965.

20 COHEN, Saul Bernard. Opus cit., p. 55.

21 GOTTMAN, Jean . *Political Partitioning of Our World*, World Politics, July 1952, IV, nº. 4.

22 COHEN, Saul Bernard. Opus cit., p. 54.

23 MILITARY DOCTRINE AND EDUCATION COMMAND OF THE ARMY OF EL SALVADOR. *Manual of Geopolitics MD 100-8*, Op. cit. p. 283.

- b) Elaborating an analysis of the geopolitical factors related to the problem being studied.
- c) Formulating the possible solutions to the problem.
- d) Analyzing the intentions of the actors that intervene in the problem.
- e) Selecting the most favorable solutions to chose the course of action to follow.

This method is used by the Army of Guatemala,²⁴ in accordance with its Strategic Planning Manual.²⁵

The method is not adequate for a continuous follow-up of something as complex as a geopolitical region.

2.1.7. Thual's Geopolitical Method

This method was developed by François Thual,²⁶ and it establishes that there is no model of geopolitical behavior, but rather depends on the elements that affect each crisis. Therefore, the study of the State's behavior depends on the circumstances and factors of the moment, considering it requires a different intellectual activity adapted to a particular situation.²⁷

On the other hand, a correct analysis of the crises permits identifying and evaluating the events. Whenever a conflict breaks out in a region, it is necessary, methodologically, to start from a source of tensions, ensure a regional analysis of those affected by this crisis, and introduce these problems in the situation of the region, including the totality of international relations.

In conclusion, Thual considers that analyzing a crisis implies a back and forth relationship among three different levels of causality:

- The situation, as to why a military or diplomatic action took place yesterday or the day before.

24 Military science. Available at <http://kaibil732.blogspot.com.es/2008/07/metodologia-del-analisis-geopolitico.html>.

25 ARMY OF GUATEMALA. *Strategy Manual*, Guatemala. January 2,005, pp. 3-3.

26 François THUAL was a professor of Geopolitics at the École Pratique des Hautes Etudes and at the Collège Interarmées de Défense.

27 THUAL, François. *Méthodes de la Géopolitique. Apprendre à déchiffrer l'actualité*, Ed. Ellipses, Paris, 1996, p.13.

- The circumstances, through the identification of the motivations and ambitions of each of those involved in the conflict.
- The structure, the perspective of these causes in the long-term.

An important advantage of this method is that it can be easily applied to regional areas, through the analysis of the various concepts from a joint perspective of the area. It is a flexible method that may introduce historical aspects in the study, to enrich the analysis.

Finally, the inconvenience of the method is that, as a geopolitical method, it is heavily focused on international relations, and there may be internal aspects of each country that might be difficult to detect through the analyses.

2.1.8. Method of the French Institute for War Studies²⁸

The process for the analysis of the phenomena of war studies starts by distinguishing the six sociological phenomena it entails: the location in time, the location in space, the shape, the structure, the dimensions, and the past, the present and the future.

The purpose of the analysis is to discover the imbalances that could be dangerous, and therefore contribute to the awareness, alertness, and prevention of possible belligerent situations, and also to apply an adequate therapy. Regarding its structure, the analysis may be divided into three parts: war study description of the phenomenon, that will include the identification, location, nature, form, and life of the phenomenon, and the quantification, and the results; the second part is the war study interpretation of the phenomenon as a symptom, of other belligerent phenomena, and the third part is the definition, classification, and future of the phenomenon.

The method is born with the vocation of preventing conflicts, and to achieve this, it contributes with long-term forecasts that they may happen. The methodology used aspires to be scientific, therefore it faces aseptic analysis, without making moral judgments nor assessments of value regarding the responsibilities to, in this manner, maintaining objectivity.

The main inconvenience that may be attributed to this method is its descriptive nature, and the lack of a global approach. Another inconvenience of this method is that it does not directly relate the public powers and the public opinion it intends

28 Spanish Institute for Strategic Studies-IEEE. Comparative study of the methodology used by the French Institute for War Studies, and at the Seminar of the IEEE. Seminar of War Studies in the Mediterranean Area. Spanish Institute for Strategic Studies-IEEE. CESEDEN. Madrid, December 1980.

to educate in the areas of analysis, as it studies the collective aggressiveness and the knowledge of the belligerent seeds, and past, present, and possible armed conflicts with its main characteristics and not the countries or areas where they surface.

Last, it renounces the study of forecasting, affirming that science studies the past.

2.1.9. Method of the Instituto Español de Estudios Estratégicos (IEEE)-(Spanish Institute of Strategic Studies)

At the end of the eighties, the IEEE developed a factor analysis method of the causes that originate war conflicts, which it published in 1990 in its Strategy Magazine nº 17.²⁹ The method is based on the classification of the causes of the conflicts at three levels: deep or permanent causes, temporary or medium level causes, and superficial or dispute causes.

And as theoretical foundation, it maintains that the analysis of the causes of the conflict help to establish a geopolitical assessment of the situation, therefore it could be complementary to any method of analysis.

Once the individual work, which is registered in a file, is finished, a team puts together all the factors grouped into spheres, according to their economic, political, social, cultural, geographic, or military content. To conclude, different considerations are drawn highlighting those factors with more significance, and that contribute the main keys of risk.³⁰

The method is that of the study of war, and it focuses its effort on the analysis of the causes of the conflict, and, although it gives the key factors to evaluate the risk, it disregards others of a geopolitical nature, which must be kept in mind.

2.1.10. Factor analysis method

Beginning with the factor analysis method that we have seen in the section above, the IEEE analysts created a factor analysis method of the causes that originate war

29 OEHLING, Hermann; FERNANDEZ SEGADO, Francisco and JIMENEZ MARTÍNEZ, Carlos et al. *Research of belligerent phenomena: Factor analysis method. Cuaderno de estrategia 17*. Spanish Institute of Strategic Studies. Ministry of Defense, Madrid, 1990.

30 *Ibidem*, pp. 44 and 45.

conflicts. It is a method of war study, which is described in Strategy Magazine nº 69³¹ of the IEEE.

The intention with this method is to find the degree of conflict of a specific social entity, whether it is a nation or a region. The analysis is carried out taking into account the roots of the conflict or crisis, as well as the relationship among the different factors.³²

The research process is continuous and flexible, and it can be modified according to the evolution of the events. In its analysis, the work seeks a triple methodological aspect:³³ firstly, it chooses the basic spheres that bring together the catalog of factors of a system, to later classify them; in the second place, gives the researchers a tool in the form of an outline that allows the evaluation of the method; and third and last, it provides the political decision-makers the political-strategic information to help them make the decisions.³⁴

As indicated in the method, *“the analytical orientation of this technique lies in its application, breaking down the belligerent or conflictive phenomena in the maximum possible key factors”*.³⁵ Regarding its development, the method is carried out in four phases: planning, information, analysis, and evaluation.

The spheres and factors are determined in the planning phase. The idea is to carry out a thorough identification of the different belligerent factors that conflicts produce. The factors are classified in the three levels that we already saw in the method of the Spanish Institute of Strategic Studies (IEEE): the deep level or level of the structures, the average or circumstantial method, and the superficial or litigious³⁶ method.

The aim of this factor method is to study the situations and areas capable of generating violence, and therefore alert the public powers about their characteristics and emergence. Although it is not concerned about public opinion, nor does it suggest preventive or corrective measures, it does intend to make available to those responsible for the strategic evaluation an auxiliary tool to detect threats.

It is a method of war study that focuses on the causes of the conflicts, but not on the rest of the geopolitical factors which may belong to the study of war even if they play an important role in the solution of the crisis or of the conflict.

31 VARCARCEL, Darío; GARRIDO, Vicente et al. *Factor Analysis of the causes that start war conflicts*. Cuaderno de Estrategia 69. Ministry of Defense., Madrid, 1994.

32 *Ibidem*, pp.17 and 18.

33 *Ibidem*, pp. 19 and 20.

34 *Ibidem*, pp. 19 and 20.

35 *Ibidem*, pp. 21.

36 *Ibidem*, pp. 27-29.

This method is not a general study, but rather it is reduced to a specific aspect, preferably related to national security. In addition, it analyzes current conflicts, trying to detect, at the same time, the latent conflicts in the area of interest by studying all the factors. It tries to infer the development, projection, and extension of the conflicts, whether they are on-going or taking shape, to other areas or countries. It has the clear advantages of a specific objective, and to go further than the past to analyze the present, and deduce the development of latent conflicts.

2.1.II. Geographic military method

For a few years, the professors of the Strategy Department in the General Staff College of the Army, developed a “geographic military” method which undertook a study of the physical, human, economic, and sociopolitical factors of a country to deduce how its armed forces should be, establishing its vulnerabilities, and the discrepancies between the existing and needed forces.³⁷

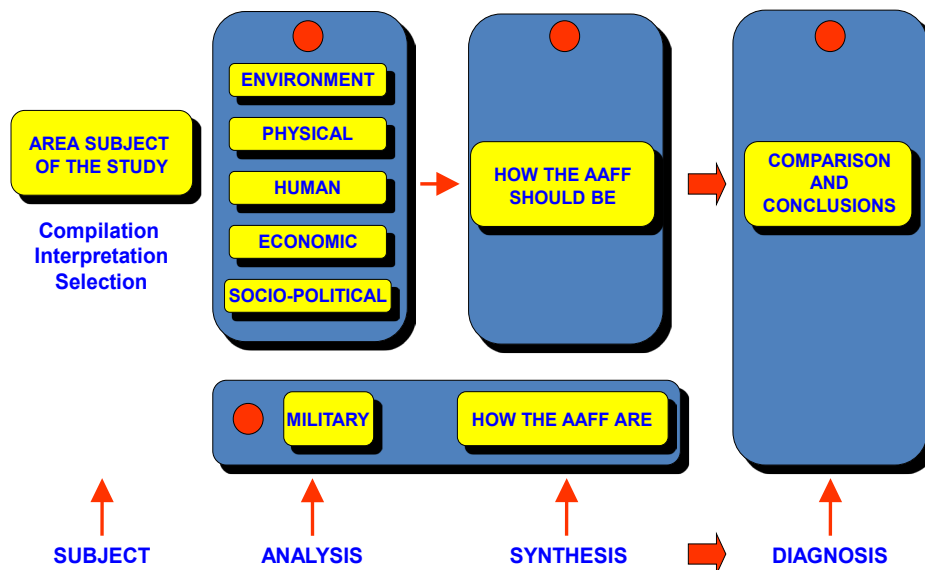
The geographic military method is an analysis process, which continues with a synthesis to eventually draw conclusions following the steps of all informational processes: definition of the objectives of the study, compilation (collection and classification of data), assessment (determine its relevance, accuracy, and description, specifying the reliability of the source), and interpretation, which is the crucial step of the cycle in which the deduction is applied seeking military conclusions, which constitute the synthesis.

The analysis must be as durable as possible which is why it emphasizes the possibilities and vulnerabilities. The possibilities, considered regardless of the attitudes, represent the capability of any country or coalition to reach its objectives, and they are the expression of its national potential, relatively stable and subject to slow changes. As far as the vulnerabilities, they represent the sensitivity of a country or coalition to any foreign action, whose quick modification is also difficult.

Regarding the analysis factors, the method determines the following factors: the environment, the physical, human, economic, sociopolitical, and military factors.

Once these factors are analyzed, a comparison is established between the armed forces that the country under study needs, and those which it really has, to proceed to examine the causes, look for their origin, establish the diagnosis of the situation.

37 RUBIO ARACIL, J. and BALLESTEROS, M. *Study Methods. Geographic- military. Geostrategic. War Studies.Arms Races.* Escuela de Estado Mayor del Ejército. Strategy Textbook., Madrid, 1992, p. 3.

DIAGRAM OF THE GEOGRAPHIC MILITARY METHOD

Prepared by the author.
 Source: M. Study Methods. Geographic- military. Escuela de Estado Mayor del Ejército. Madrid
 Diagram 2

The conclusion is that the geographic military method is not adequate to study these geopolitical regions, or to analyze international stability.

2.2. Conclusion of the methods analyzed

In view of the analysis of all the methods studied, we reached the conclusion that corroborates the hypothesis: *the existing geopolitical methods of analysis are not efficient to carry out assessments of the stability and instability of geopolitical regions.*

Therefore, it is necessary to establish a method to analyze political regions based on the study of factors capable of detecting the emergence of any risk or threat through the variation of instability of the region. For this, we will start from the contributions of the existing methods that are better adapted to current needs.

3. PREREQUISITES OF THE NEW METHOD

Above all, a method of an instrumental nature that facilitates the design and management of the strategy for national security is needed. Among other characteristics, this method should be suitable to be applied in the national or the allied areas. It must be useful to undertake the study of a geopolitical region or of an international

organization, and, at the same time, it must be flexible and open enough to be compatible with the intellectual contributions of the analyst.

Thus, for the new method to be useful, it must meet the following requirements:

- Its scope of application must be global.
- It must be interdisciplinary.
- It must be prospective to be able to act in various temporary horizons.
- It must be able to be evaluated.
- It must be open.
- It must be realistic and coherent.

Regarding its scope of application, the method must be global, even if the plan is to facilitate the elaboration and management of a specific National Security Strategy, since “*To understand the parts, we must first direct our attention to the whole, because this whole makes up the field of study that is intelligible in itself*”.³⁸

On the other hand, the method must be at the service of a long lasting strategy. The security strategies have a minimum horizon of 10 years, although this does not exclude its periodic revision. Thus, for example the Spanish Strategy for Security (*EES-Estrategia Española de Seguridad*) established a horizon of 10 years and a revision every five years or when the circumstances require them.³⁹ Nonetheless, the Foreign Action Strategy has a 20-year horizon and establishes four scenarios for Spain extracted from the report “Spain in the World 2033”.⁴⁰ Thus, the method cannot be limited to evaluate the current situation, but rather it requires a certain foresight, to be able to visualize the most possible future scenarios on a mid and long term basis. In other words, it is necessary to study the present, but also the tendencies that set the road ahead. In other words, the method must grasp the “future” of the present, whatever is still in seed, but hasn’t grown. The entire present is impregnated with the future, and the task of the analyst is to go beyond reality as it appears, which means unraveling the future: what is not, and what may be.⁴¹

38 TOYNBEE, Arnold. *Study of History*. Madrid: Alianza Editorial, Madrid, 1981, p. 25.

39 GOVERNMENT OF SPAIN. *Spanish Security Strategy. A responsibility of all*. Madrid, 2011, p. 18.

40 MINISTRY OF FOREIGN AFFAIRS AND COOPERATION. *Foreign Action Strategy*. MAEC, Madrid, 2014, p. 27.

41 VALCÁRCEL, Darío; GARRIDO, Vicente et al. *Factor Analysis of the causes that originate war conflicts*. Opus cit., p. 20.

The method must be “able to be evaluated”, in other words, that it may be assessed as much as possible, in those aspects that allow us to determine how far the objectives are being reached, as well as the costs that the strategy implies.

It must also be “interdisciplinary”, ruling out a single approach, whether it is diplomatic, economic, military or any other. As a consequence of globalization, reality is multi-faceted, and more complex day by day, and it cannot be understood if we observe it from only one point of view. Polarizing our activity into only one, means that we forget the figure, the shape, and even more, the essence of that form and figure.⁴²

The national security strategy is very complex, as multiple factors of the most diversified areas converge in it, among others: politics, economics, religion, ideological, or the military capability. All of this has a bearing on the need for the method to be interdisciplinary. The EES (Spanish Strategy for Security) indicates that security is a complex task, in an interdependent world, under transformation.⁴³

Another prerequisite of this method is that it must be “open”, because it will allow us to reach the different objectives of the strategic analysis that may come up, and may not have been present at the moment of its elaboration. The method must allow the definition of the purpose and aim of the national security strategy.

Furthermore, the method must be “realistic and coherent”, which means that it must deal with possible strategies for the capabilities available on a short, mid and long-term basis; and that these be coherent with the level of ambition of the society of the country or the international organization that will implement it.

Last, the method must “rely on other sciences”, that acquire an instrumental nature for us, as are demography, economics, sociology or statistics, among others. Thus, when carrying out the analysis of the data available, it is necessary to become familiar with the corresponding indicators and measurement values of the mentioned sciences.

4. METHOD OF ANALYSIS OF GEOPOLITICAL REGIONS (*MARG-MÉTODO DE ANÁLISIS DE REGIONES GEOPOLÍTICAS*)

In the first place, it is necessary to define and channel the purpose of the study, which will condition the entire process of the analysis. Considering it is within the framework of the design and elaboration of the national security strategies (ESN), the aim of

42 STRANCH, Hew . *European Armies and the Conduct of War*. Ediciones Ejército, Madrid, 1985, p. 10.

43 GOVERNMENT OF SPAIN. *Spanish Security Strategy. A Responsibility for all*. Opus cit., p. 9.

the study will be to analyze the stability and instability of every geopolitical region, as well as the risks and threats that such instability entails for the national interests considered in the ESN. The method will provide the definition and prioritization of the geopolitical regions, which will be reflected in the strategy mentioned.

Without a doubt, the method is not free of certain subjectivity in its assessment, caused by the point of view from which the study is carried out. In spite of it, the analysts should be as objective as possible, as it is the only way to avoid mistakes in the assessment.

METHOD OF ANALYSIS OF GEOPOLITICAL REGIONS (MARG)

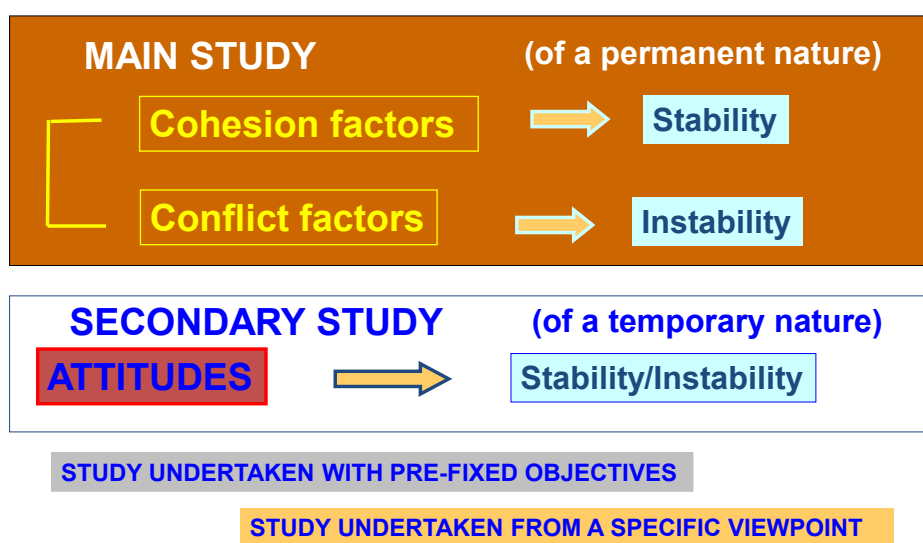


Diagram 3

Author's elaboration

During the management of the NSS, the method will serve the processes of instability, and help in decision making, and the management of crises. With this aim, the method establishes two levels of analysis:

- The main study, which analyzes those variables of each factor that have a more permanent character and, starting from them, the factors of cohesion or of conflict will be specified. The former provide stability to the region, while the latter cause instability.
- The secondary study is of a temporary nature, and it gives special attention to the current attitudes and circumstances that may alter the cohesion and conflict factors.

4.1. Phases of the method of analysis of the stability and instability of geopolitical regions

The steps to develop are the following:

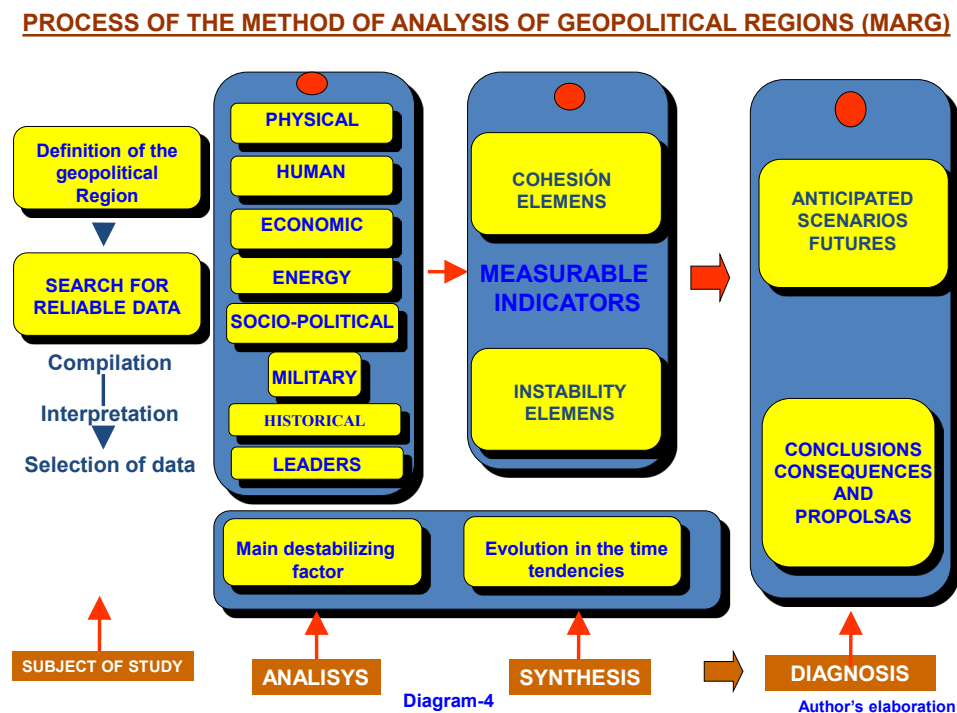
- 1st PHASE: Define the geopolitical region to be studied.
- 2nd PHASE: Gathering of data and its interpretation to finally select the variable data that are reliable and useful for the study. This implies the selection of variables; establishing the way to quantify them and organizing them by factors. This will lead to the analysis phase.
- 3rd PHASE: Analysis of the chosen factors, which will normally be:
 - Physical.
 - Human.
 - Economic.
 - Energy.
 - Military.
 - Historical.
 - Personality of the leaders.
 - Another factor of interest (according to the aim of the study).

The analysis will determine which are the systems of balance or imbalance of power in the region studied. What is the main factor of destabilization will also be established, as this will serve to delineate the priority elements for the analysis and follow-up of the geopolitical regions.

- 4th PHASE: This is the phase of synthesis, where the cohesion factors and the factors of instability that favor the conflict are established. In addition, for each element of cohesion or instability, the variables and their indicators must be established, as they make up the signals that will facilitate the assessment of the regional events, as well as their influence on the risks and threats. These variables must preferably be measurable to facilitate their follow-up. The indicators may be the result of combining the data of various related variables. The observation, throughout time, of these indicators will provide us the trends, which will allow us to make projections for the future.
- 5th PHASE: Diagnosis phase in which the possible future scenarios are established, their consequences and probability of occurrence. This will be reflected in a diagram that will allow us to establish a comparative evaluation of risks and threats, as we will see in Section 5.

Last, the method will allow us to carry out reports with the conclusions of the study, the tendencies observed and the proposals to try to guide the decisions, so that the authorities may direct their policies and strategies to advance toward the desired scenarios.

The MARG is shown in the following graph.



4.2. Variables to analyze in each factor

Although the variables to analyze in each factor will depend on the objective of geopolitical study, the most common variables to analyze in each factor are given as guidelines. Each one of these variables should be analyzed individually and interrelating them to others, to see if they contribute to the stability or to the instability of the geopolitical region. As much as possible, they will be gathered numerically by means of indicators. The variables to initially consider are the following:

4.2.1. *Physical factor*

- *Generalities*: Physical structure, predominant physical features, unifying and disruptive facets.
- *Location*: Position, centralizing areas and accessibility.
- *Extension and form*: Total and relative, limits, borders.
- *Relief and configuration*: Morphological analysis, compartmentalization.
- *Communication networks*: highways, railways, airports, communications nodes, unavoidable transit points.
- *Hydrography*: Springs, waterways basin types, with special attention to the cross-border ones.
- *Coasts and seas*: Dimensions and constitution, islands, continental shelf, routes, ports, natural shelters.
- *Climatology*: Climatic area, microclimate, main meteorological phenomena, relevant seasons. Environmental problems.
- *Vegetation*: Dominant vegetation, forests extension, empty areas. Deforestation problems.
- *Fauna*: Most important species and their distribution, migrations, characteristics of exploitation.

4.2.2. *Human factor*

- *Generalities*: Human environment, occupied areas, expansion and regression.
- *Demography*: Population, vital statistics, migrations, demographic indices, demographic trends, distribution of production factors.
- *Environment*: Rural and urban, degree of concentration, type of housing and of cities.
- *Race and ethnic group*: Types, degree of homogeneity, existing problems, centrifugal and centripetal tendencies.
- *Languages and dialects*: Types, internal or internal projection, problems it poses, current tendencies.

- *Religion*: Relation among the existing ones, integrating or separatist currents, political and social influences, current tendencies.
- *Psychology and character*: Expression of the different characters, dominant ideologies, foreseen relations.
- *Culture and education*: Schools and universities, educational system, compulsory education.
- *Health*: Health system, hospitals, health education, epidemic diseases, health in general, health indices.

4.2.3. Economic factor

- *Generalities*: Historical and economic background, economic system to which it belongs, conditioning characteristics (micro and macro economics), general development. Current economy.
- *Economic system and type of economy*: Level of intervention of the State, economic managing organisms, state and private economy, international economic organizations.
- *Domestic product and domestic income*: Gross Domestic Product (GDP) at market prices, Net Domestic Product (NDP) at market prices, GDP at cost of factors, Domestic income, position in the world by GDP and Domestic Income, position among countries within its environment by GDP and Domestic Income.
- *Distribution of national income*: Distribution by production sectors (functional), geographic distribution, personal distribution (Gini Index), mechanisms for redistribution of Income.
- *Financial and taxation system*: Method to obtain financial resources, priority sectors, banking system, fiscal system.
- *State budget*: Analysis of the budget, priority sectors, budget tendencies, contrast with neighboring environment.
- *Labor relations*: Active population, unemployment.
- *Basic resources*: Agriculture, livestock, fisheries, mining.
- *Industry*: Types of industry, location, technological level, defense industry, capital and perishable goods.

- *Trade*: Import and export, volumes, balance of trade, balance of services and capital, external dependency, location of commercial areas. Contribution to the GDP.
- *Transportation and communications*: Land, sea, waterways, air, special.
- *Social media*: State, private, radio broadcasting and television, telephone, telex, telefax, mail, press and editorials.
- *Standard of living*: “Per capita” incomes, economic development, economic growth, expenditure savings capacity.

4.2.4. *Energy factor*

- *Generalities*: Energy system, energy mixture, main, state, and private fields.
- *Energy sources*: Oil, gas, carbon, hydroelectric, alternative energies.
- *Energy routes*: Oil pipelines, gas pipelines, maritime routes, electric grid, key transit points.
- *Evolution of consumption*: Fuels, electricity, strategic reserves.
- *Energy technology*: Technological development, investments in energy R & D.
- *Import, export*: Energy providers, customers.
- *Energy explorations*: Of oil, gas.
- Energy dependencies and tendencies.
- *Energy transport*: Oil tankers, Liquefied Natural Gas (*Gas Natural Licuado-GNL*) ships.
- *Alternative energy*.

4.2.5. *Historical factor*

- *Political history*.
- *Military history*.
- *Historical background of the economic situation*.
- *Political, economic and military agreements and treaties in history*.

- *Stability factors throughout recent history.*
- *Instability factors throughout recent history.*
- *CV of its leaders.*

4.2.6. Socio-political factor

- *Generalities:* Socio-political situation, socio-political conflictivity, elements of national identity, centrifugal and centripetal influences.
- *Physical framework:* Territory, borders, critical areas, enclaves, the capitals, natural tendencies.
- *Human support:* Historical data, the family and primary groups, municipalities and smaller entities, provinces and regions, social strata, political parties, unions, dominating ideologies, pressure groups, minorities, social control.
- *The organization of the States:* Political systems, the constitutions, executive, legislative and judicial powers, the governing bodies.
- *Foreign policy:* International relations and areas of influence, membership in international organisms, pacts and alliances, repercussions of foreign policy on national issues, and viceversa, main tendencies.

4.2.7. Military factor

- *Generalities:* Collective defense area, military strategies, alliances, most important Armed Forces.
- *Defense and Armed Forces Organizations:* Military High Command, organizations of the armed forces, military alliances.
- *Recruitment and mobilization:* Form of conscription of military service, analysis of the contingents, mobilization systems, regional impact.
- *Land forces:* Organization and deployment, mission, commands, training and proportion; armament and materiel.
- *Naval forces:* Organization and deployment, mission, commands, training and proportion; armament and materiel.

- *Air force:* Organization and deployment, mission, commands, training and proportion; armament and materiel.
- *Other forces:* Foreign forces in the territory, own forces abroad, joint utilization bases, shared missions.
- *Paramilitary forces:* Total forces, organization and deployment, arms and materiel, missions to accomplish.
- *Armament and materiel:* Origin, age and state of repair, domestic arms industry, maintenance.
- *Organisms of military information:* Hierarchy among them, forces and media, deployment, efficiency.
- *Other aspects:* Army integration in society, military education, non-professional command structures.
- *Failed states.*
- *Failed seas.*

4.2.8. *Personality of the leaders*

- *Education, values, aggressiveness, ideology.*
- *Intelligence.*
- *Personality and temperamental variables, degree of self-control.*
- *Professional experience.*
- *Social influence, social adaptability.*
- *Leadership.*
- *Family status.*
- *Behavior under pressure.*
- *Distribution of internal power.*
- *Regional political leadership.*
- *Regional religious leadership.*
- *Regional military leadership.*

- *Regional economic leadership.*
- *Facilities for the succession of the leaders.*

4.3. Application of indicators

As Calduch indicates: *“The development of behavioral sociology in the United States prompted an irresistible influx in the rest of the social sciences and, naturally, also on the theoreticians of International Relations. The will to impose the methodological rigor that requires the use of mathematics on International Relations prevailed at that moment. Thanks to the use of mathematics, natural sciences were able to emerge from its pre-scientific stage, with the hope of reaching a reasonable degree of prediction”*.⁴⁴

Calduch adds that *“another significant aspect of the quantifying tendencies has concentrated on the elaboration of statistical indicators of the main theoretical concepts (...) the elaboration and research of new indicators and statistical series constitutes one of the theoretic-methodological fields that our discipline should pursue”*.⁴⁵

We could initially classify the indexes by the factor in which they are catalogued: physical, human, economic, socio-political, military, etc. And on the other hand, by the number of variables that comprise each one of the indexes, and that may be uni-variant, bi-variant, or multi-variant. As the number of variables that intervene in them grows, its complexity makes them less reliable, especially when one of those variables is not totally objective.

Each one of the elements into which we have separated the different factors we have seen previously lead to various indicators of one or two variables. But it is also possible to use multi-variable indicators that are elaborated by different international organizations such as the following:

- The Human Development Index (HDI) elaborated by the United Nations Development Program (UNDP).⁴⁶ It also elaborates other indexes such as the ones for inequality of human development, gender inequality, gender development, and the multidimensional index of poverty.

44 CALDUCH CERVERA, Rafael. *Application of indicators in International Relations: index of National Political Insecurity*. Mexico D.F.: Revista de Relaciones Internacionales nº 94 (January-April 2006), Facultad de Ciencias Políticas y Sociales de la Universidad Nacional Autónoma de México, p. 47.

45 *Ibíd.*, pp.48 and 49.

46 UNITED NATIONS PROGRAM FOR DEVELOPMENT. Human Development Report. 2013. Acquired October, 24, 2014, at: <http://hdr.undp.org/es/data>.

- The Failed States Index,⁴⁷ which is the result of adding twelve variables from each country.
- The International Organization for International Transparency creates an index to evaluate the perception of corruption in each country, measured on a scale from zero to ten. This index is based on reports from experts, and thus, is largely subjective.⁴⁸
- The Institute for Economics and Peace elaborates the Global Peace Index, an indicator that measures the level of peace in a country or region. It is based on 23 indicators that permit assessing the degree of violence.⁴⁹ This institute also elaborates the Global Terrorism Index, which classifies 162 countries, by the number of terrorist incidents, deaths, injuries and damages.⁵⁰
- The Freedom House Institute elaborates the index of Freedom in the World which is produced from the union of the variables about political rights and civil liberties.⁵¹
- The index of Economic Freedom in the World⁵² is elaborated by several organisms, among which the Fraser Institute stands out. The index measures the level of economic freedom in five large areas: the size of the State; judicial system and guarantee of property rights; monetary solidity; international trade freedom; and regulation.
- The World Bank created the global governance indicators. Through a series of annual reports, the changes in the evolution of government issues in the different countries are projected, measuring various groups of variables, combining them as follows: 1) Accountability that measures the willingness of the citizens to participate and demand complying with the commitments from those who govern. 2) Political stability and absence of violence, which measures the

47 THE FUND FOR PEACE. *The Failed States Index 2013*. Acquired July 30, 2014 at: <http://ffp.statesindex.org/rankings-2013-sortable>.

48 INTERNATIONAL TRANSPARENCY SPAIN (2014). Acquired November 2, 2014 at: <http://www.transparencia.org.es/>.

49 INSTITUTE FOR ECONOMICS AND PEACE (2014). *Global Peace Index*. Acquired November 3, 2014 at: <http://economicsandpeace.org/research/iep-indices-data/global-peace-index>.

50 INSTITUTE FOR ECONOMICS AND PEACE (2014) *Global Index on de Terrorism 2014*. Acquired November 4, 2014 at: <http://www.prnewswire.com/news-releases/indice-global-de-terrorismo-2014-282991061.html>.

51 FREEDOM HOUSE (2014). *Freedom in the World 2013*. Acquired November 5, 2014 at: https://freedomhouse.org/sites/default/files/FIW%202013%20Booklet_0.pdf.

52 GWARTNEY, J.; LAWSON, R y HALL, J. *Economic Freedom in the World 2013*. Mexico: Fraser Institute, Mexico, 2014.

probability that the government may be destabilized. 3) Government efficiency, which measures the quality of the public administration. 4) Regulatory quality, which measures the capability of the government to formulate and implement policies for the development of the public sector. 5) The Rule of Law, which measures the degree in which the government agents comply with the rules of the game. And lastly, 6) control of corruption.⁵³

We could add many others to all these indicators or barometers.⁵⁴ When carrying out the first part of the geopolitical analysis, the indicators that can contribute more and better information for the purpose of the study should be established, and they will be different in each case, or an indicator could be expressly designed to adapt to the needs of each case.

Calduch proposed the index of Insecurity of National Politics (INP), establishing the methodological demands it must meet, differentiating among structural insecurity, current insecurity, and insecurity of the situation. The first two would relate to the analysis of the main study, while the third one, to the secondary study of the suggested method.⁵⁵

Juan Diez Nicolás developed the Synthetic Index for Subjective Security (Índice Sintético de Seguridad Subjetiva-ISSS)⁵⁶ which completes the indicator of General Security Perception (*Percepción de Seguridad General-PSG*), which is what an individual answers when asked about his feeling of security in the neighborhood and in the city where he lives. The ISSS is based on 15 variables and has strong relations with three indicators: residential security; problems in the neighborhood; and daily fears and worries.

5. COMPARATIVE EVALUATION OF RISKS AND THREATS

Through the MARG method for the analysis of stability/instability of geopolitical regions, we can detect the emergence of new risks or the variations of those previously identified. Starting from the identification of the new situation, the comparative evaluation of risks, through a diagram on a coordinate axis follows.

⁵³ WORLD BANK. *Indicators of world ingovernability 2013*. Acquired October 25, 2014 at: <http://www.revistaperspectiva.com/archivos/revista/No%2031/042-043>.

⁵⁴ CALDUCH CERVERA, Rafael (2005). *Application of Indicators in International Relations: Index of National Political Insecurity*, Opus cit., pp. 50-59.

⁵⁵ *Ibidem*, pp. 58-63.

⁵⁶ DÍEZ NICOLÁS, Juan. *Subjective Security in Spain; Construction of a Synthetic Index of Subjective Security*. Ministry of Defense, Madrid, 2011, pp. 113-120.

The probability that the risk escalates in the strategic chain becoming a danger or even becoming a threat capable of influencing the political action, even causing damages in one of the national interests is represented in the abscissa axis.

The importance of the damage that the materialization of the risk could cause is represented on the ordinate axis.

A numeric indicator will be placed on each risk, and will serve to establish the index of reliability of the information available about the analyzed risk. This is similar to what is used in the British National Security Strategy.⁵⁷

The representation of the multiple risks and threats are on the same coordinate axes just as is done in the Netherlands in its National Risk Assessment Analysis,⁵⁸ where there is a comparative study of scenarios represented in a graph of risks.

Each one of the risks and threats is identified with a letter that corresponds to its identifying name. Keeping in mind that it is frequent to use data which is not always contrasted, and with different degrees of reliability, and taking as reference the criteria used in the National Intelligence Estimates (NIEs),⁵⁹ we will use a numerical identification system of the level of trust on the assessment, which will consist on putting a number (1-2-3) next to the risk (blue hexagon) or threat (red star).

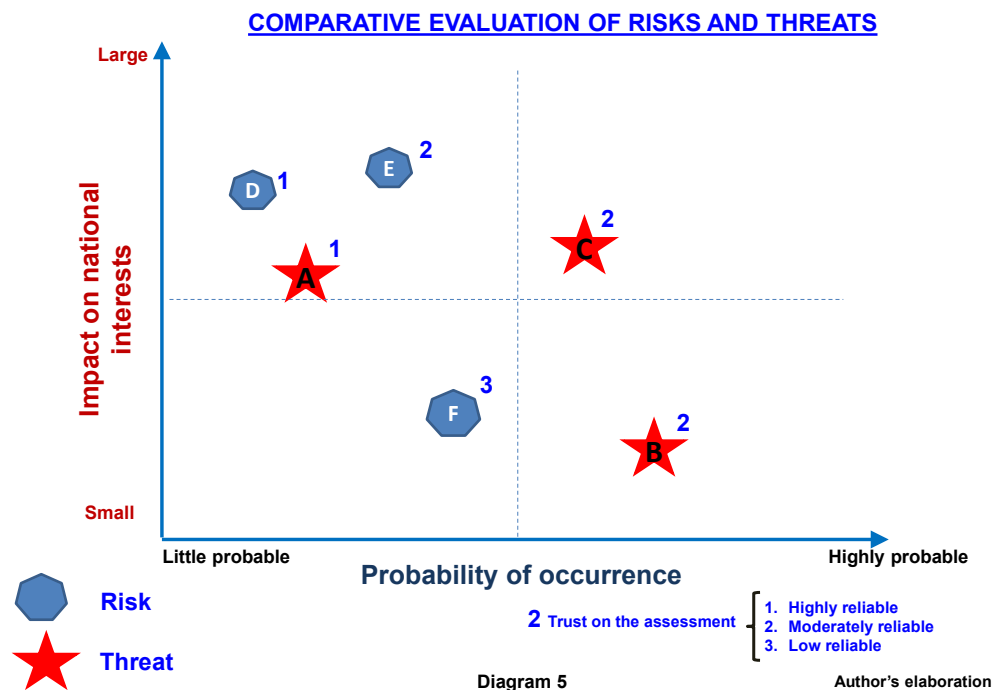
The number identifies the degree of reliability of the analyses and has the following meanings:

1. Highly reliable: assessment based on safe and totally reliable sources.
2. Moderately reliable: assessment based on sources general credible and safe, but not sufficiently validated.
3. Low reliability: assessment based on questionable sources or information.

⁵⁷ BRITISH GOVERNMENT (2010). *A Strong Britain in an Age of Uncertainty: The National Security Strategy*. Opus cit. p. 37.

⁵⁸ THE NETWORK OF ANALYSTS FOR NATIONAL SECURITY (ANV) FOR THE NATIONAL STEERING COMMITTEE FOR NATIONAL SAFETY AND SECURITY (SNV). (2014) *National Risk Assessment 6*. Opus cit. p. 6.

⁵⁹ NATIONAL INTELLIGENCE COUNCIL (2012). National Intelligence Estimates (NIEs). Acquired September 22, 2014 at: <http://www.dni.gov/index.php/about/organization/national-intelligence-council-nic-publications>.



The result of the representation of risks and threats on the Cartesian axes is that upon dividing into four quadrants, we can see that those which are more probable and that would have more impact on national interests are grouped in the upper right quadrant; therefore, they must be given priority when adopting measures to address them. On the contrary, the risks and threats grouped in the lower left quadrant are the least probable and those which would have the least impact; therefore, these are the ones that require less attention.

6. EMPIRICAL RESEARCH

An empirical investigation to test the degree of reliability of the Method of Analysis of Geopolitical Regions (MARG) was carried out, taking advantage of a paper of studies of geopolitical regions that the students in the class of 2012-2013 at the Armed Forces General Staff College completed. The students were divided into small groups so each of them had to do a geopolitical region analysis using as factors, the following: the physical, the human, the economic, in which energy was included, the socio-political, and the military, following the MARG. They were given a month's deadline to conduct the study, to deliver it, and to have it be corrected and evaluated by the professors of the Strategy and International Relations Department, and later, half the students gave a presentation of their work to the rest of the students.

The 103 students were officers from the three services, and from Common Services, and Guardia Civil, mostly Spanish, but also from other countries, and all with at least 15 years of professional experience.

Thirteen geopolitical regions were established: Central and Eastern Africa, the Maghreb, Central America and the Caribbean, South America, Australia, the former Soviet Europe, the Russian Federation, the Arabian Peninsula, the Middle East, the Far East, the Caucasus and Turkey, Central Asia, and Southeast Asia. As can be seen there are regions that due to their size only include one country, which, if necessary, could be of interest for the analysis of the survey.

Each geopolitical region was studied by at least two teams, which permitted its verification in case there were difficulties for any of the teams, due to the characteristics or to the difficulty of the region to study.

Once the paper was delivered, the students voluntarily took a survey to assess the method.

The method of analysis of geopolitical regions was verified by carrying out two studies during several years with the students who took the course in the Armed Forces General Staff College. The author gave them a survey in December of 2010, and the questionnaire was improved with those results, giving them a new survey in November of 2012 after doing an analysis of different geopolitical regions to assess the usefulness of the method. Finally, it was decided to use only the survey from November of 2012 to assess the MARG.

The research followed a criterion of rigor, reliability, and validity through the design of a quantitative and qualitative research. The quantitative research *par excellence* is the survey through sampling, using information from a representative sample to describe the characteristics of the population that originated the sample.⁶⁰ But, in addition, the students did a practical study with the method, which was later corrected by the professors of the Strategy Department, and which all the participating groups passed with grades higher than 5 (pass).

The general aim of the questionnaire was to evaluate the validity or not of the MARG, and it also sought to satisfy the following partial aims:

- Assess the phase of analysis.
- Assess the phase of synthesis.
- Determine the importance of the factors used in the analysis.
- Proposals of new factors to study.

60 Vivanco, M. *Statistical sampling, Design and applications*. Editorial Universitaria, Santiago de Chile, 2005.

- Importance and need of the phase of synthesis.
- Proposals to improve the method.

The research was designed through a questionnaire seeking an assessment of the usefulness of the method employed, as well as its difficulty and reliability.

The students of the General Staff course had classes on how to apply the method with the Department of Strategy and International Relations at the *ESFAS*, and were later told to carry out a practical exercise of the application of the method which consisted in doing the analysis of stabilities and instabilities in a geopolitical region.

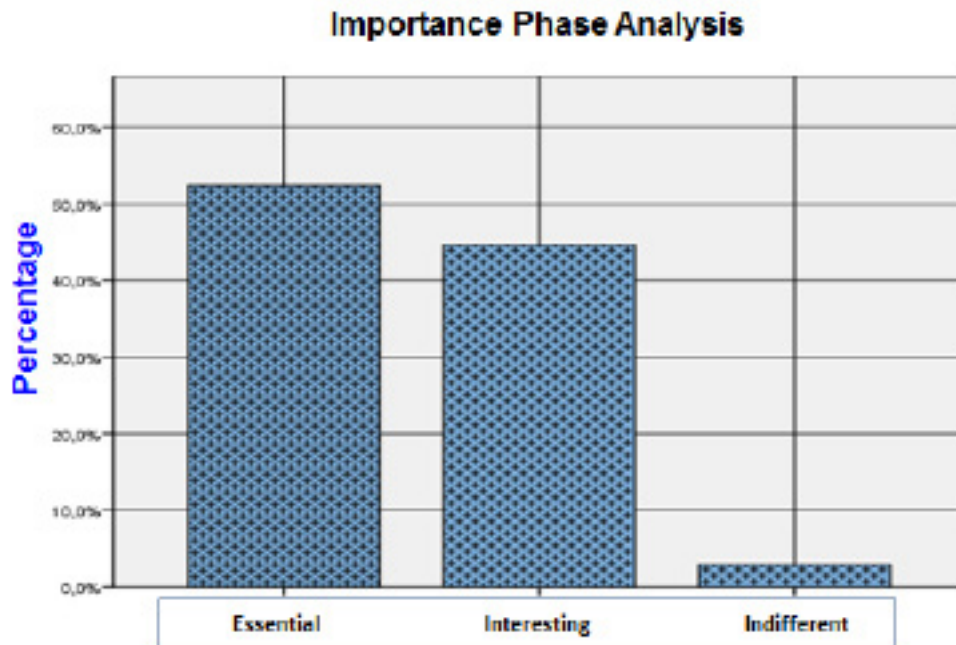
6.1. Analysis of the results of the study

The method is assessed as globally good or very good. After evaluating the analysis of the data by armies and by regions analyzed, there are no significant differences.

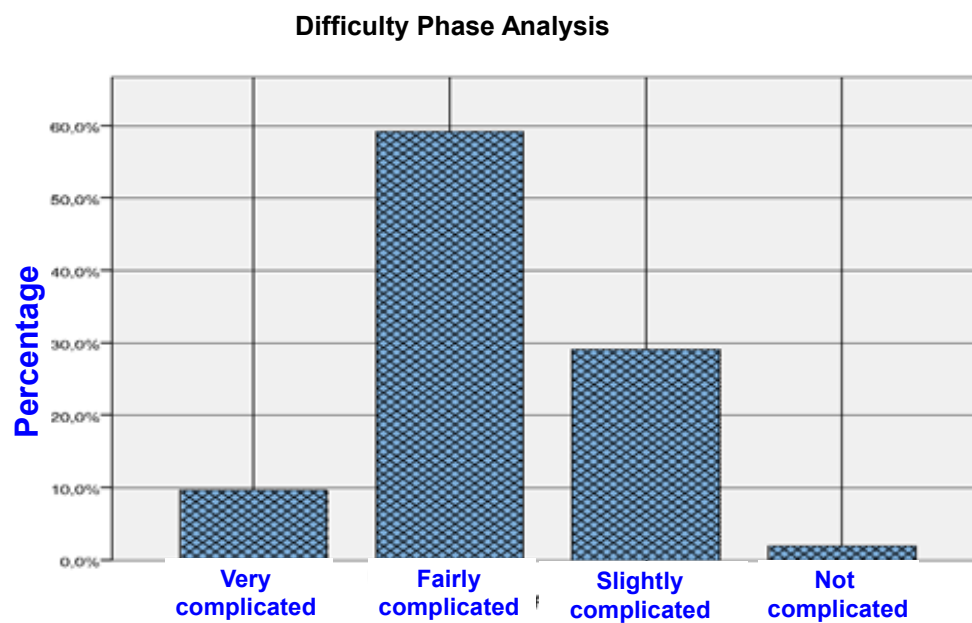
The evaluation of the method keeping in mind the army of origin of the surveyed person, as well as the country of origin, can be seen in the following table:

SERVICE	Global Assessment of the Method interpolated to Spain											
	Very good		Good		Adequate		Slightly Adequate		Inadequate		NA	
	n	% fila	n	% fila	n	% fila	n	% fila	n	% fila	n	% fila
ARMY	0	0,0%	25	52,1%	14	29,2%	7	14,6%	1	2,1%	1	2,1%
NAVY	1	10,0%	4	40,0%	3	30,0%	2	20,0%	0	0,0%	0	0,0%
AIR FORCE	3	16,7%	7	38,9%	6	33,3%	2	11,1%	0	0,0%	0	0,0%
CS	0	0,0%	2	100,0%	0	0,0%	0	0,0%	0	0,0%	0	0,0%
GC	0	0,0%	3	75,0%	1	25,0%	0	0,0%	0	0,0%	0	0,0%
NATO foreign	0	0,0%	3	37,5%	5	62,5%	0	0,0%	0	0,0%	0	0,0%
NON NATO foreign	1	7,7%	9	69,2%	3	23,1%	0	0,0%	0	0,0%	0	0,0%

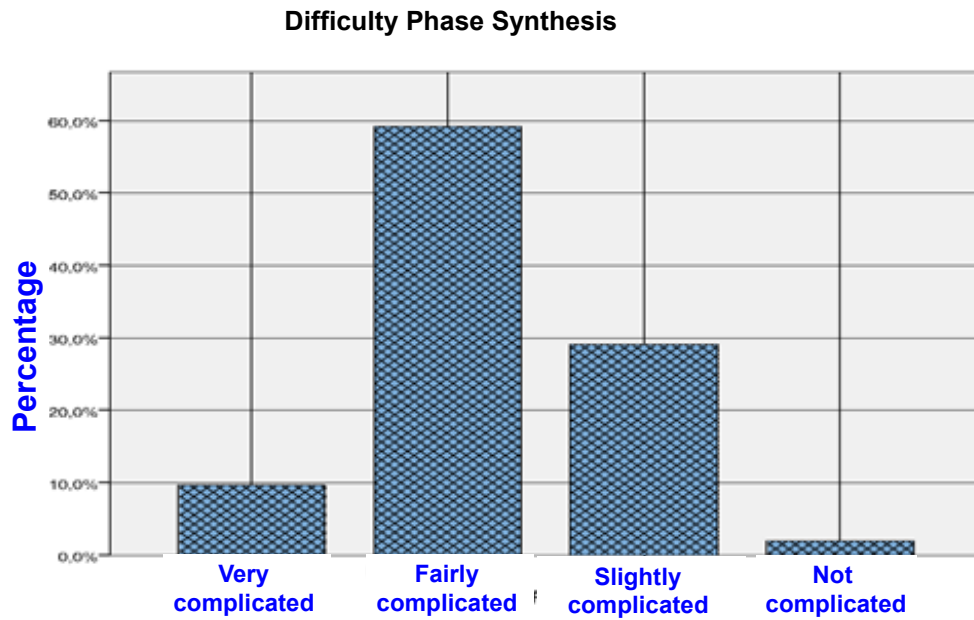
The assessment of the phase of analysis is the following:



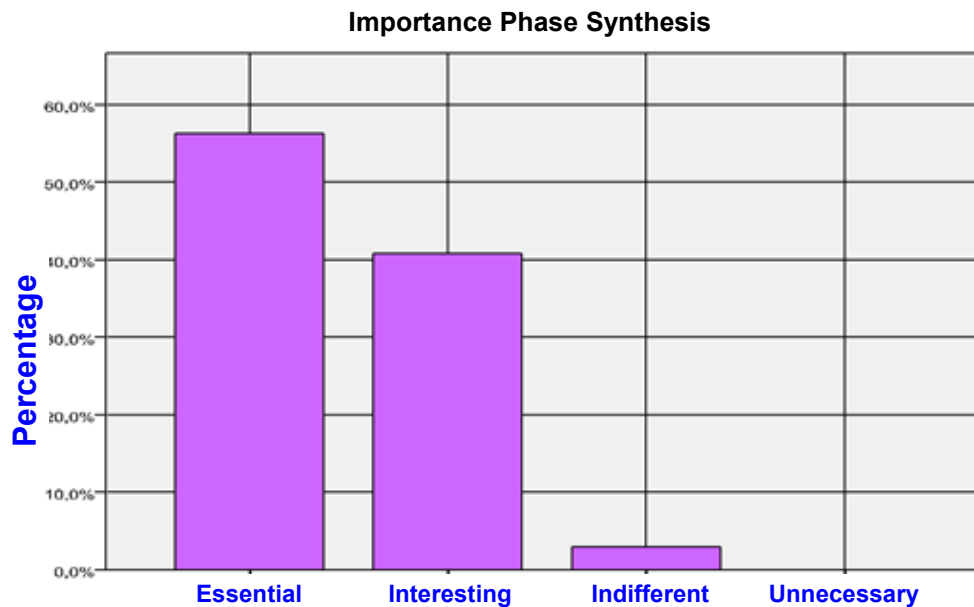
The assessment taking account the difficulty found to undertake the phase of analysis is the one reflected in the following graph:



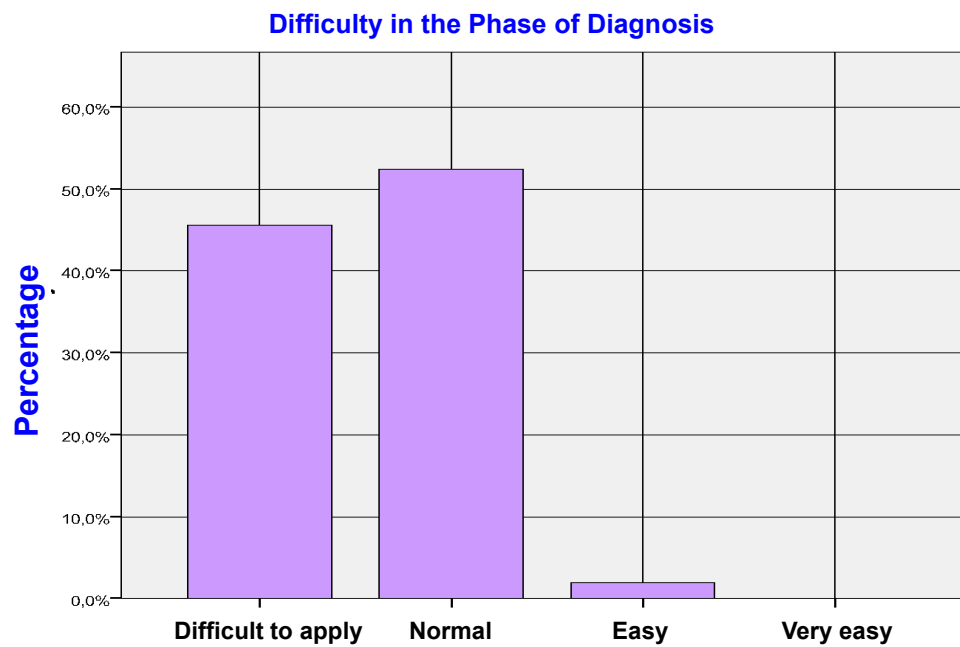
The result from assessing the difficulty of the factors in the phase of Synthesis is the following:



The importance of the phase of Synthesis is the one reflected in the following graph:

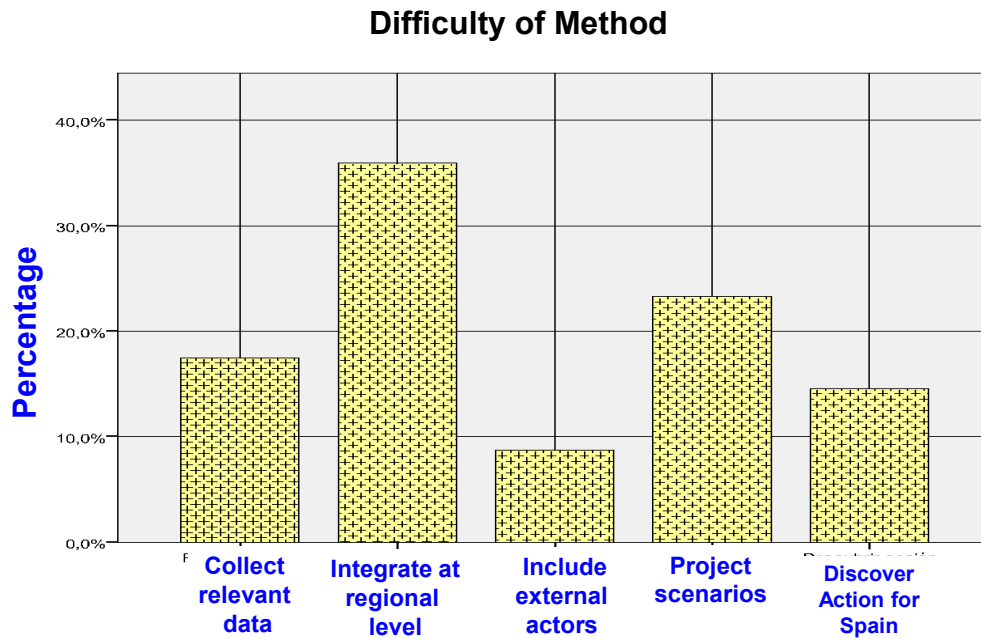


The result of the assessment of the difficulty in the Phase of Diagnosis to design future scenarios is the following:



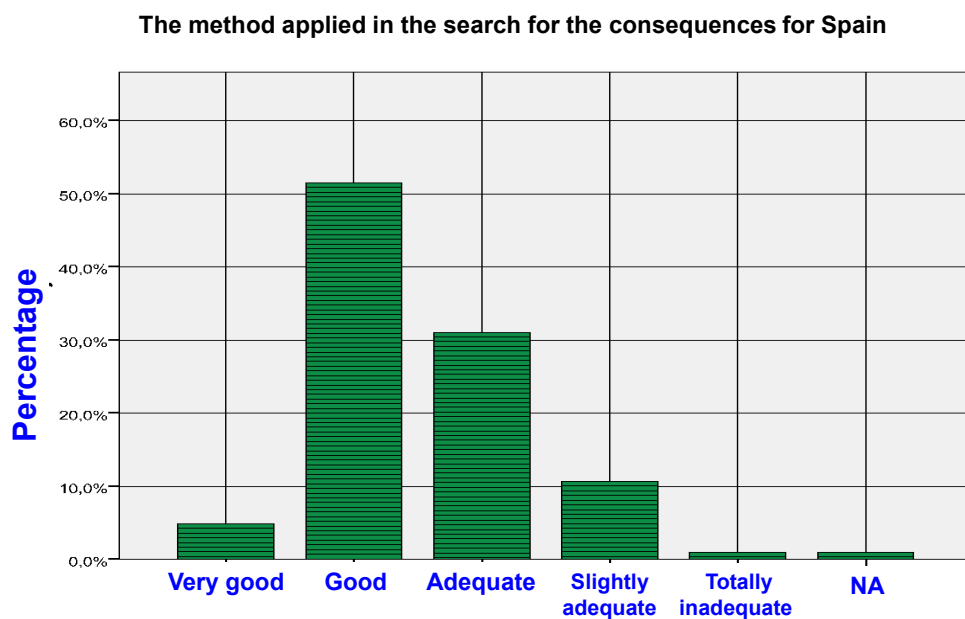
6.2. Final conclusions to the empirical research

To the question of which is the greatest difficulty of the method, the result was the following

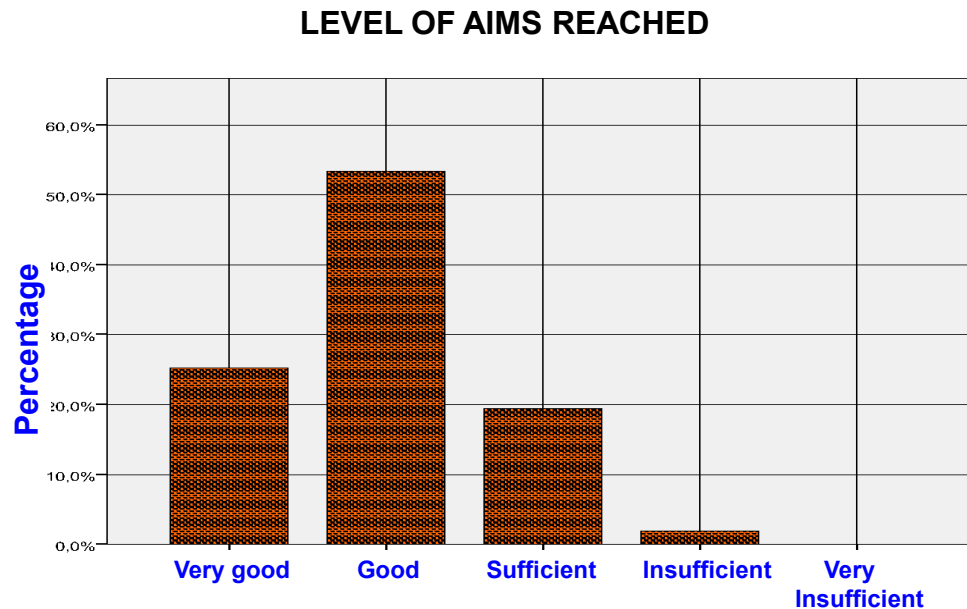


The answers in the level of the aims reached, general as well as specific, are positive in general terms. The predominant global assessments are distributed between good and adequate.

To the task: “Carry out a global assessment of the method applied in the search for the consequences for Spain in its relations with the region and its stability/instability in the geopolitical region”, the results were:



To the question: *“To what degree do you think the general aim and the specific aims of the analysis of the geopolitical region have been reached?”*



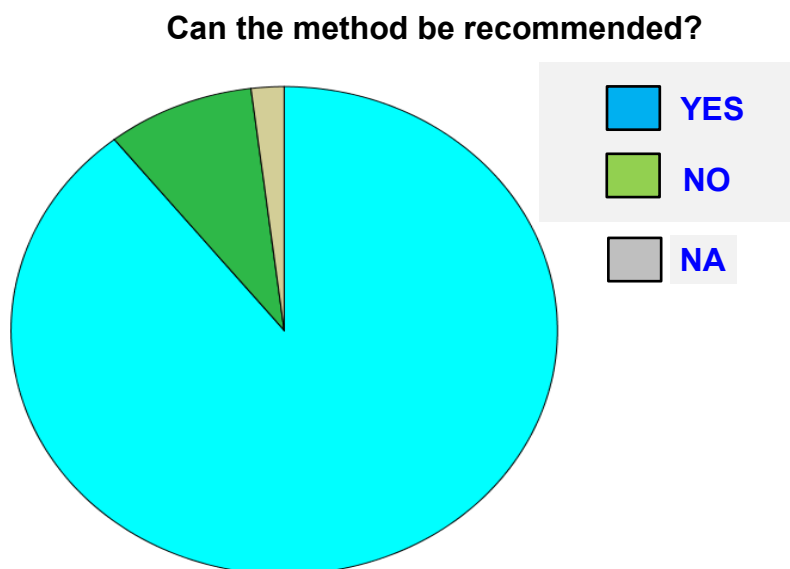
In the comments made by those surveyed there is a frequent demand for greater allocation of hours to learn the method. This is consistent with the difficulties they mentioned they found when analyzing factors such as the socio-political factor.

When asked if they think other factors should be included besides the ones already studied (physical, human, economic, socio-political, and military) the results are mainly the following: energy, history and international relations, and leaders.

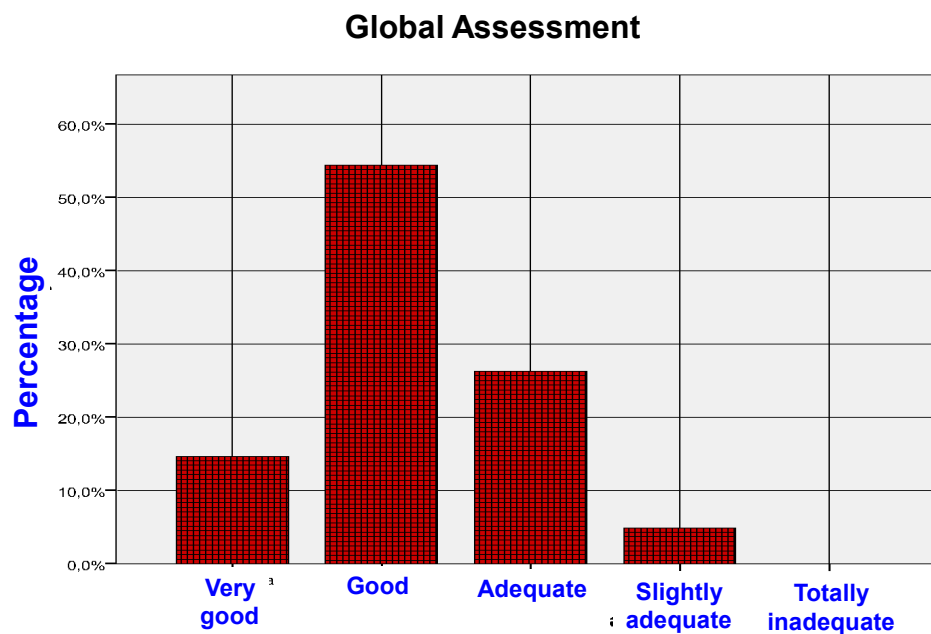
Thus, it is clear that there is a demand to detach the energy factor from the economic factor, and the historical factor from the socio-political one, as was originally considered; therefore, in the method proposed by the author, a doctoral student, these two factors were in the previous chapter, regardless of whether the method requires new assessments. It was also considered convenient to include the factor of the profiles of the leaders.

To the question: *“Would you recommend this method of analysis to carry out the study of geopolitical regions?”*

The affirmative answer is very clear:



The results of the global assessment of the method are the following:



Practically 70% considers the MARG good or very good, and only 5% considers it slightly adequate. This assessment is, regardless of the service to which they belong, of the military rank of the surveyed person, of the nationality, or of the region studied. Therefore, we consider the method adequate to reach the objectives sought to facilitate the analysis and follow-up of the geopolitical regions.

7. CONCLUSIONS

The MARG method that we introduce in this work is useful to undertake the analysis of geopolitical regions. The empirical research was carried out on 12 different regions successfully. It is thus demonstrated that it is a global method.

The method is based on studies of physical (geographic), human, economic, energy, socio-political, historical factors, and the personality of the main leaders (psychology), therefore, we can consider it interdisciplinary.

The analysis of all the mentioned factors and their evolution in time, allows us to discover tendencies, and even to do prospective studies with various temporary horizons. The method includes the establishment of predictable future scenarios.

The method suggests the use of indicators in each one of the factors, simple indicators, and even starting from them, more complex indicators, created through simple mathematical formulae. The indicators are established through numeric values, and even transforming qualitative variables into other quantitative ones, although most will be quantitative. All of this permits an easy follow-up of the events in the geopolitical region studied. The above mentioned shows that MARG is a method that can be evaluated.

It is an open method as it permits including in the study those factors and indicators that may be considered necessary for the aims of each study. On the other hand, the study considers the need to identify that or those factors which are particularly destabilizing, and that are essential to facilitate the follow-up.

The method has a scientific character and is realistic, as it is based on reliable data, which guarantee the asepsis of the method in determining the elements that contribute to cohesion, and therefore, to the stability of the region; simultaneously seeking the instability elements, which makes it a realistic method.

On the other hand, the great amount of factors and elements studied forces the search for coherence throughout the entire study. This will allow reaching conclusions, consequences, and proposals whenever necessary.

Finally, the instability elements will help us identify the risks and threats to the geopolitical region and to represent them in a single graph, keeping in mind the probabilities that each one will materialize, and the security consequences that it would have. The reliability of the information that leads us to locate each risk and threat in the coordinate axes is also represented. This graph facilitates decision making and the level of attention that must be paid to each factor and its indicators.

In summary, it is a global, interdisciplinary, prospective, able to be evaluated, open, realistic, and coherent scientific method.

BIBLIOGRAPHY

- ACKERMAN, Edward A. *The Science of Geography*, Washington: NAS-NRC Publication 1277. Washington, 1965.
- BALLESTEROS, Miguel Ángel; VILLALBA, Aníbal; DELGADO, Alfonso, et al. *Fundamentos de la Estrategia para el siglo XXI. (Strategy Foundations for the 21st Century)* Monograph 67 of the CESEDEN. Madrid, Ministry of Defense, 2003.
- BERTALANFFY, Ludwig von. *General System Theory*, Place?? Ed. Harmondsworth., Penghin, 1973.
- CALDUCH CERVERA, Rafael. Aplicación de indicadores en las relaciones internacionales: índice de inseguridad política nacional. (Application of indicators in international relations: index of national politics insecurity) Mexico DF: Revista de Relaciones Internacionales nº 94 (enero-abril 2006). Centro de Relaciones Internacionales. Facultad de Ciencias Políticas y Sociales. Universidad Nacional Autónoma de México.
- CALDUCH CERVERA, Rafael. *Política exterior y de seguridad de España en 2003. (Foreign and Security Policy in Spain in 2003)* Madrid: INCIPE, 2003.
- CALDUCH CERVERA, Rafael. Nuevos métodos y técnicas de investigación aplicables a las Relaciones Internacionales. (New methods and research techniques applicable to International Relations) Madrid: Estudios Internacionales de la Complutense. vol. 3, nº 1/2001.
- COHEN, Samuel. *Geografía y política en un mundo dividido*, translated from Geography and politics in a world divided by Ricardo Español Iglesias, Madrid, Ed. Ejército, 1980.
- COHEN, S. and ROSENTHAL, Lewis D. A Geographical Model for Political Systems Analysis. *The Geographical Review*, January 1971, LXI, nº 1.

- COMANDO DE DOCTRINA Y EDUCACIÓN MILITAR DEL EJÉRCITO DEL SALVADOR (MILITARY DOCTRINE AND EDUCATION COMMAND OF THE ARMY OF EL SALVADOR). Manual de geopolítica MD 100-8, (Geopolitical Manual) San Salvador, March, 1998.
- DIÉZ NICOLÁS, Juan. *La seguridad subjetiva en España : construcción de un índice sintético de seguridad subjetiva (ISSS)*. (*Subjective security in Spain: construction of a synthetic index of subjective security*) Madrid : Ministry of Defense ,2011.
- GOVERNMENT OF SPAIN. *Estrategia Española de Seguridad. Una responsabilidad de todos*. (Spanish Security Strategy. A responsibility of all) Madrid, 2011.
- GOVERNMENT OF THE NETHERLANDS. *National Security: Strategy and Work Programme (2007-2008)*, The Hague, Ministry of the Interior and Kingdom Relations, 2007.
- GOVERNMENT OF THE UNITED KINGDOM. *A Strong Britain in an Age of Uncertainty: The National Security Strategy*. Official publications, Londres, 2010.
- GOTTMAN, Jean. Political Partitioning of Our World, World Politics, July 1952, IV, nº 4.
- HARTSHORNE, Richard. Political geography in HARTSHORNE, Richard, PRESTON, J. and CLARENCE, J. (cords.). *American Geography Inventory and prospect*, Syracuse: Ed. Association of American Geographers, University Press, Syracuse, 1954.
- HARTSHORNE, Richard. The functional approach in political geography, *Annals of the Association of American geographers*, XL June, 1950.
- INSTITUTO ESPAÑOL DE ESTUDIOS ESTRATÉGICOS-IEEE. (Spanish Institute for Strategic Studies) Estudio Comparado de la metodología seguida por el Instituto Francés de Polemología y por el seminario del IEEE. (Comparative Study of the methodology followed by the Instituto Francés de Polemología and by the seminar of the IEEE) Seminario de Polemología del Área Mediterránea. (Seminar on War Studies in the Mediterranean Area) Instituto Español de Estudios Estratégicos IEEE. CESEDEN. Madrid, December 1980.
- MINISTERIO DE ASUNTOS EXTERIORES Y COOPERACIÓN. (MINISTRY OF FOREIGN AFFAIRS AND COOPERATION). *Estrategia de Acción Exterior*. (*Foreign Action Strategy*)Madrid, MAEC, 2014.
- NACIONES UNIDAS. *Informe sobre desarrollo humano de 1994*. México D.F., Fondo de Cultura Económica, 1994.
- NACIONES UNIDAS (UNITED NATIONS). *Estudio sobre conceptos y políticas de seguridad con fines defensivos*. (*Study about security concepts and policies with defensive aims*) A/47/394. New York, UN, 1993.

- NACIONES UNIDAS (UNITED NATIONS). *Estudio Sobre los Conceptos de Seguridad (Study about the Concepts of Security) A/40/55*. New York, ONU, 1985.
- OEHLING, Hermann; FERNANDEZ SEGADO, Francisco and JIMÉNEZ MARTÍNEZ, Carlos et al. Investigación de fenómenos belígenos: Método analítico factorial. (Research of belligerent phenomena: Factor analysis method). Cuaderno de estrategia 17. Instituto Español de Estudios Estratégicos. Ministry of Defense, Madrid, 1990.
- PROGRAMA DE NACIONES UNIDAS PARA EL DESARROLLO. (UNITED NATIONS PROGRAM FOR DEVELOPMENT) (2014). Informe de Desarrollo Humano (Human Development Report) 2013.
- RAPOPOT, A. *Teoría General de los sistemas (General Theory of the systems)*, Enciclopedia Internacional de las Ciencias Sociales, Tomo 9. (International Encyclopedia of Social Sciences, Vol. 9) Ed. Aguilar., Madrid, 1976.
- RUBIO ARACIL, J. and BALLESTEROS, M. *Métodos de estudio. Geográfico militar. Geoestratégico. Polemológico. Carreras de armamento (Study methods. Geographic military. Geostrategic. War study. Arms race.)* Libro de texto de Estrategia. (Strategy Textbook) Madrid, Escuela de Estado Mayor del Ejército, 1992.
- SILVERMAN. D. *The Theory of organisations*, London, Heineman, 1970.
- THUAL, François. *Méthodes de la Géopolitique. Apprendre à déchiffrer l'actualité*, Paris, Ed. Ellipses, 1996.
- TOYNBEE, Arnold. *Estudio de la Historia. (Study of History)* Madrid: Alianza Editorial, 1981.
- VARCARCEL, Darío; GARRIDO, Vicente et al. Análisis Factorial de las causas que originan conflictos bélicos. (Factor Analysis of the causes that originate war conflicts) Cuaderno de Estrategia 69. Madrid, Ministry of Defense. 1994.
- WHITTLESEY, Derwent. *The Earth and the State*. New York, Henry Holt, 1944.

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