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STRATEGIC FORESIGHT PROCESS—IMPROVEMENTS FOR THE HUNGARIAN MINISTRY OF DEFENSE

by

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In 2013–2014, the Hungarian Ministry of Defense (HUN MoD) engaged in its first structured strategic Foresight process, a process designed to examine events that might affect Hungary until 2030. While it achieved success, the process also had shortcomings. Namely, the Strategic Analysis Group accurately predicted two events, Russia's use of military force and the migration crisis worsening, yet they neither foresaw how fast Russian aggression would result in military conflict nor did they believe in their findings enough to appropriately prepare for the migration crisis. This thesis introduces the evolution and main concepts of Futures Studies and Foresight. It describes the Hungarian Strategic Foresight process and results, explains how the Hungarian experts contemplated the crises before they started, and compares their considerations to the actual events. It also uses the diagnostic tools inherent in Voros's generic Foresight framework to analyze the HUN MoD's Strategic Foresight process, confirming those findings with Popper's methods categories. The thesis concludes that the Foresight process had relevant flaws caused by being unprepared regarding Foresight methodology and also by being intelligence-focused rather than leaving room for alternative future possibilities and out-of-the-box thinking. The thesis recommends improving Strategic Foresight methodology, building Foresight capacity, and raising awareness about the relationship between intelligence and Foresight work in the HUN MoD.

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STRATEGIC FORESIGHT PROCESS—IMPROVEMENTS FOR THE HUNGARIAN MINISTRY OF DEFENSE

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ABSTRACT

In 2013–2014, the Hungarian Ministry of Defense (HUN MoD) engaged in its first structured strategic Foresight process, a process designed to examine events that might affect Hungary until 2030. While it achieved success, the process also had shortcomings. Namely, the Strategic Analysis Group accurately predicted two events, Russia's use of military force and the migration crisis worsening, yet they neither foresaw how fast Russian aggression would result in military conflict nor did they believe in their findings enough to appropriately prepare for the migration crisis. This thesis introduces the evolution and main concepts of Futures Studies and Foresight. It describes the Hungarian Strategic Foresight process and results, explains how the Hungarian experts contemplated the crises before they started, and compares their considerations to the actual events. It also uses the diagnostic tools inherent in Voros's generic Foresight framework to analyze the HUN MoD's Strategic Foresight process, confirming those findings with Popper's methods categories. The thesis concludes that the Foresight process had relevant flaws caused by being unprepared regarding Foresight methodology and also by being intelligence-focused rather than leaving room for alternative future possibilities and out-of-the-box thinking. The thesis recommends improving Strategic Foresight methodology, building Foresight capacity, and raising awareness about the relationship between intelligence and Foresight work in the HUN MoD.

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LIST OF ACRONYMS AND ABBREVIATIONS

DPD	Defense Planning Department, Hungarian Ministry of Defense
EU	European Union
HDF	Hungarian Defense Force
HUN MoD	Hungarian Ministry of Defense
MENA	Middle East and North Africa
NATO	North Atlantic Treaty Organization
ONA	Office of Net Assessment, U.S. DoD
SAG	Strategic Analysis Group

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I. INTRODUCTION

The past is the beginning of the beginning and all that is and has been is but the twilight of the dawn.

—H.G. Wells

From 2013–2014, during a strategic analysis and evaluation process at the Hungarian Ministry of Defense (HUN MoD), experts utilized a strategic Foresight analytical framework to identify potential threats for the period of 2015–2030.[1] Among other things, they accurately predicted the current European migration crisis and a more aggressive Russian foreign and security policy. However, it seems they were neither specific enough regarding the time frame of these potentials nor did they believe strongly enough in their findings. For instance, the HUN MoD experts conjectured that Russia might be aggressive on the scale currently true around 2020 at the earliest. In addition, although their final strategic Foresight report stated explicitly that a migration crisis in Europe might evolve due to the wars in the Middle East, the experts did not believe that it would really happen. So, even though experts were aware of the trends and drew appropriate conclusions, they did not predict the timing of the events nor did they expect that some of their findings would really come true. In reality, both increased Russian aggression and widespread migration, which the experts identified within their research, have had substantial effects on Hungary.

These phenomena raise several questions. This thesis attempts to answer at least one core question so that improvements can be adopted. Why did the experts of the HUN MoD—including the author of this thesis—not take their conclusions seriously enough to foresee that their findings not only would happen, but would happen within a very short period of time? In order to address the core question, the research here analyzes the HUN MoD's strategic Foresight process with the help of well-known Foresight frameworks provided by the literature. Once possible answers are found, it is worth asking further

[1] The author of the thesis took part in the 2013–2014 Foresight process of the HUN MoD. Much of the information in the thesis is from his experience and observations.

questions: how did the process itself affect the outcome, and what kind of organizational dynamics could better enable Foresight work in the future?

Accordingly, now that the thesis has introduced the need for improvements in Hungarian Foresight analysis, Chapter II will introduce and explore the concept of strategic Foresight. Chapter III goes on to describe the process and method of strategic Foresight at the HUN MoD during 2013–2014, highlighting some of the conclusions drawn from the Foresight process. Chapter IV then examines how, why, and in what ways the experts of the HUN MoD considered the possibilities of Russian military interventions and a European migration crisis before these events started. The fourth chapter continues with an examination of the actual events and introduces their impacts on their Hungarian Defense Force (HDF). Having introduced Foresight and examined the HUN MoD's process as well as the relationship between that process and events, as well as effects on the HDF, Chapter V then utilizes the diagnostic tools from Joseph Voros's Foresight framework and Rafael Popper's Foresight methods categories to analyze the HUN MoD's strategic Foresight process. The thesis then concludes with Chapter VI, which gives recommendations based on the research.

II. STRATEGIC FORESIGHT

Although many definitions and interpretations of strategic Foresight exist, we can define Strategic Foresight as, essentially, the methods by which organizations come to identify and predict possible events that may effect the environment in which they operate so that they can both mitigate risks and exploit opportunities. Strategic Foresight is only one form of Foresight, and Foresight is only one aspect of Futures Studies. To clarify what strategic Foresight is and what it is not, Chapter Two first describes Futures Studies and introduces the role and place of Foresight within the domain of Futures Studies, then further describes Foresight in general as well as understandings regarding strategic Foresight in particular.

A. FUTURES STUDIES

Before World War II, predicting the future was largely a matter of mysticism rather than science. While people have likely been trying to predict the future as long as they've been around, in his 2011 article "Evolution of Futures Studies," Tuoma Kuosa observes that no scientific approaches for studying the future seem to have existed before the 1940s–1950s.[2] Instead, Kuosa explains, people that wanted to know what the future might hold were likely to rely on supernatural beliefs and mysticism; professionals like oracles or fortune-tellers communicated very deterministic future outcomes using various methods like Tarot card reading, psychic seeing, crystal ball reading, astronomy, or varying interpretations of Nostradamus's predictions, all still popular today.

According to Kuosa, in the 1940s and 1950s, many economic, social, and scientific phenomena emerged that increased the demand for a better understanding of the future, and Foresight emerged especially into military thought.[3] Among other phenomena, globalization, industrialization, and urbanization all reached new heights; space travel, usage of nuclear technology, and development of information technology all began. Kuosa also pointed out that in this rapidly changing environment, management

[2] Tuomo Kuosa, "Evolution of Futures Studies," *Futures* 43, no. 3 (2011): 329.

[3] Ibid., 332.

thinking prospered (see Figure 1), and more and more actors realized that they needed a solid foundation and method for long-term planning. At the same time, new methods were developed and certain methods matured (including trend-extrapolations, technological Foresight, and game-theory), and various actors began to apply these methods for making predictions and forecasting.[4] The RAND Corporation also created innovative approaches for developing military strategies and understanding new military technologies better.[5] Probably, the most important development during and directly after World War II regarding Foresight was the emergence of scenario planning. First, Herman Kahn used scenario planning for studying how the Soviet Union and the United States could use nuclear weapons against each other.[6] Kahn was well-recognized for further developing the method, to the point that Scientific American magazine characterized Kahn as "thinking the unthinkable," and, Stanley Kubrick used Kahn "as the model for Dr. Strangelove in the classic film."[7]

In the 1960s and 1970s, future research began to spread further outside the military. Researchers started to study the long-term effects of phenomena like energy consumption, population growth, environmental issues, economic development, and even social movements.[8] During this period two particular scientific concepts, system thinking and futurology, emerged and became highly influential.[9] Published in 1966, *History and Futurology* by Ossip Flechtheim was maybe the most relevant piece in Futures studies and suggested, among other things, that futurology should solve the problems of humanity to avoid catastrophes, wars, oppression, and poverty.[10]

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[4] Ibid., 332.

[5] Tuomo Kuosa, *The Evolution of Strategic Foresight: Navigating Public Policy Making* (Farnham, Surrey: Gower, 2012), 6.

[6] Herman Kahn, *Thinking about the Unthinkable in the 1980s* (New York: Simon and Schuster, 1984).

[7] Rich Horwath, *Scenario Planning: No Crystal Ball Required* (Chicago: Strategic Thinking Institute, 2006), 1.

[8] Kuosa, "Evolution of Futures Studies," 331.

[9] Ibid.

[10] Ossip Kurt Flechtheim, *History and Futurology* (Meisenheim Am Glan: Hain, 1966).

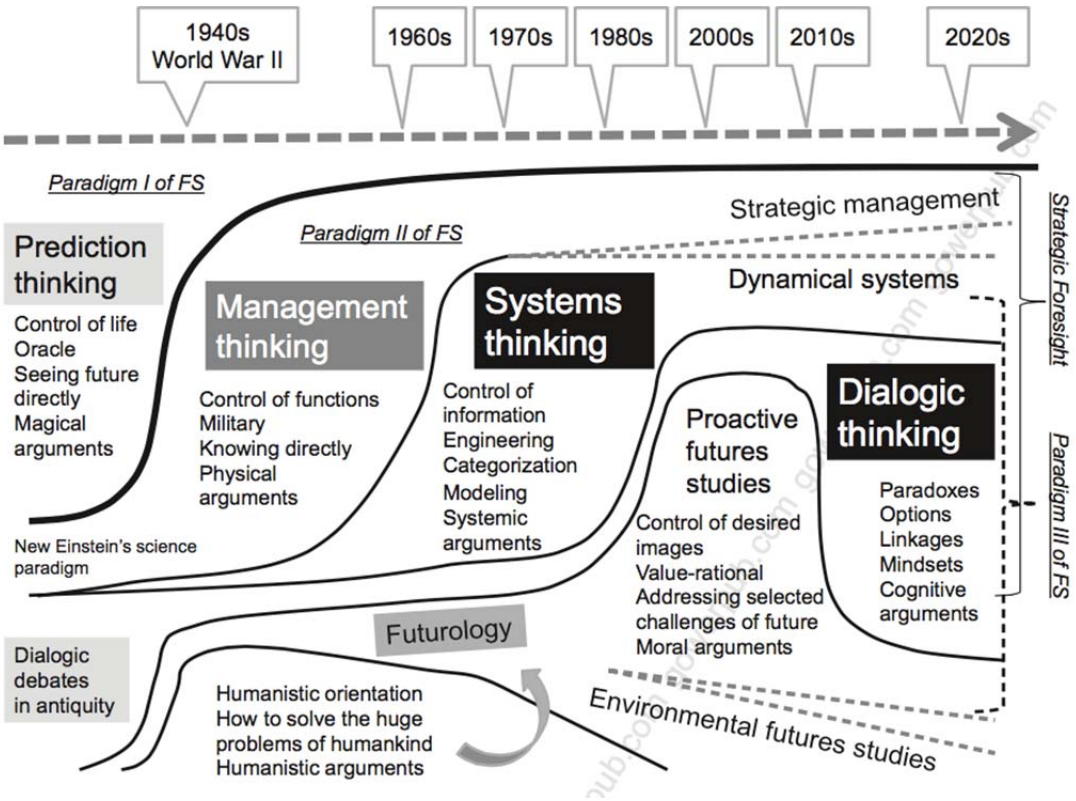

Figure 1. Evolution of Future Studies and Foresight Domain.[11]

Interestingly, even though dialectic thinking and especially strategic management became more and more prevalent in the 1980s, heavily impacting Future Studies, there has not been as much methods development in the last 30 years. According to Kuosa, developing strategic management concepts created the opportunity for Foresight to have a more significant role again in Futures Studies.[12] However, Kuosa highlights that, while the 80% of the Futures Studies methods were created in the first 30 years (1950–1980), only 20% of the methods have been developed in the next 30 years (1980–2010).[13] Kuosa points out that new methods regarding future research have barely emerged since the 1980s,[14] so that it is possible that the methods of Future Studies themselves deserve a revamp.

[11] Kuosa, *The Evolution of Strategic Foresight,* 25.

[12] Kuosa, "Evolution of Futures Studies," 332.

[13] Ibid.

[14] Ibid.

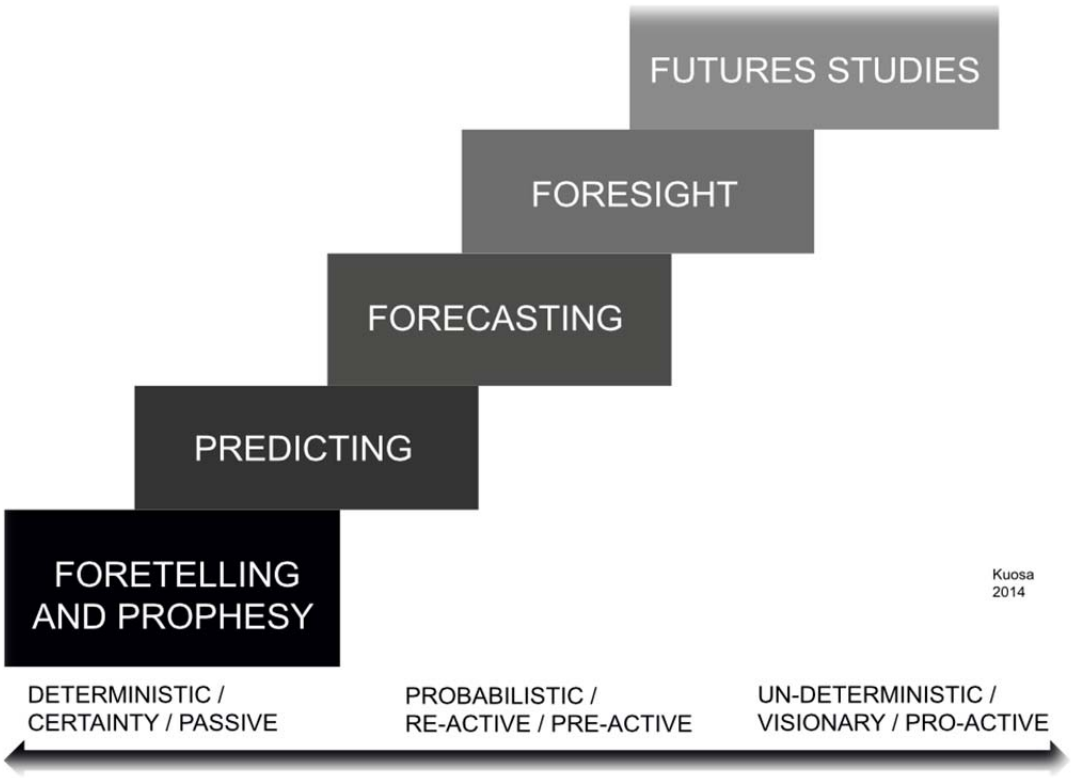

Figure 2. The Scale of Five Classes of Future Domain.[15]

As Figure 1 demonstrates, many approaches exist for studying the future, and researchers then looked for ways to categorize the approaches. Tuomo Kuosa categorized the different approaches into five classes and put them onto a scale that shows how deterministic/un-deterministic and active/passive each of the classes are in relation to each other (see Figure 2).[16] According to Kuosa, the first category of future approaches is "foretelling and prophesy," which is the most deterministic and passive approach and does not have any scientific basis at all and would include a fortune-teller telling the future from a crystal ball.[17] "Predicting," Kuosa's second category, happens, for example, when meteorologists and statisticians use very strong causalities "to predict

[15] Tuomo Kuosa, *Towards Strategic Intelligence: Foresight, Intelligence, and Policy-making* (Vantaa: Dynamic Futures, 2014), 31.

[16] Ibid.

[17] Ibid.

events with nearly 100% certainty."[18] "Forecasting," Kuosa's third category, involves exploiting and study past data by modeling and econometric techniques including trend curves and trend extrapolations, among others; the kind of extrapolation of past data that happens when, for example, demographers try to forecast demographic data for the future or economists forecast the GDP growth of a country for next year.[19] Kuosa explains that one of the main differences between forecasting and prediction is that forecasting provides estimations of probabilities while prediction does not.[20]

At a higher level of "pro-activity," "visionary," and "un-deterministic" level on the scale, "Foresight" is Kuosa's fourth category. The so-called FOREN report, considered the official EU guidance for Foresight analysis, defines Foresight as:

> a systematic, participatory, future-intelligence-gathering and medium-to-long-term vision-building process aimed at present day decisions and mobilizing joint actions. Foresight arises from a convergence of trends underlying recent developments in the fields of "policy analysis", "strategic planning" and "future studies". It brings together key agents of change and various sources of knowledge in order to develop strategic visions and anticipatory intelligence.[21]

Accordingly, while the starting point of Foresight is similar to forecasting, as it also studies trends, Foresight attempts to gain a deeper and more holistic understanding of the future. The process of Foresight often involves several actors and also provides alternatives rather than only one single forecast.[22] Kuosa's fifth category is Futures Studies, which has a similar methodology as Foresight but is even more visionary and pro-active as it "attempts to vision a better world and make a change towards it."[23]

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[18] The weather for the next day, for instance.

[19] Kuosa, *Towards Strategic Intelligence,* 31.

[20] Ibid.

[21] François Farhi, James P. Gavigan, and Michael Keenan. *A Practical Guide to Regional Foresight* (Brussels: FOREN, Foresight for Regional Development Network, 2001), v.

[22] Kuosa, *Towards Strategic Intelligence,* 31–32.

[23] Ibid.

B. FORESIGHT

Currently, Foresight is understood as a systematic process, where the participants of the process intend to understand future probabilities in a holistic and grounded way. Because it is actually impossible to entirely predict the future, Foresight lays emphasis on creating alternative scenarios, providing "some probabilities beyond linear predictions [that] can be attributed to emerging social phenomena."[24] However, practitioners of Foresight insist that the roots of future exist in the present, thus certain present variables have to be studied in a systematic way to get a better understanding about possible futures and future possibilities.[25]

Foresight rose as a utilized methodology in the 1980s and especially in the 1990s, thanks in large part to the growing understanding of the importance of and clarity regarding strategic thinking. While, as mentioned earlier, the origins of Foresight date back to pre-WWII, Foresight was not used as a method very often until the 1980s, while forecasting and future studies dominated the 1960s and 1970s. In the 1990s, Foresight gained prevalence thanks to Mintzberg, who made a distinction between strategic thinking and strategic planning,[26] a conceptual innovation that also triggered new ideas concerning Foresight. According to Mintzberg, while strategic planning is a formalized, analytical process that breaks down a goal into steps, "strategic thinking, in contrast[,] is about synthesis. It involves intuition and creativity. The outcome of strategic thinking is an integrated perspective of the enterprise, a not-too-precisely articulated vision of direction."[27] Taking Mintzberg's concept into consideration, Joseph Voros then argued that Foresight was "an aspect of strategic thinking," as it focuses on exploring the future and developing options but does not cover the implementation of actions.[28] According to Voros's understanding, the process of creating a strategy is a series of consecutive, interdependent steps where strategic thinking is the first one. Thus, for him strategy

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[24] Ibid.

[25] Ibid., 32–33.

[26] Henry Mintzberg. "The Fall and Rise of Strategic Planning," *Harvard Business Review* 72, no. 1 (January/February 1994): 107–114.

[27] Ibid., 108.

[28] Joseph Voros. "A Generic Foresight Process Framework," *Foresight* 5, no. 3 (2003): 13.

making comes as the second step, where decisions are made about strategic goals based on the information gathered from strategic thinking, and the last step is implementing actions. So, according to Voros, Foresight is one aspect of strategic thinking which provides input to the next step, strategy making, with the idea that implementation will follow.[29]

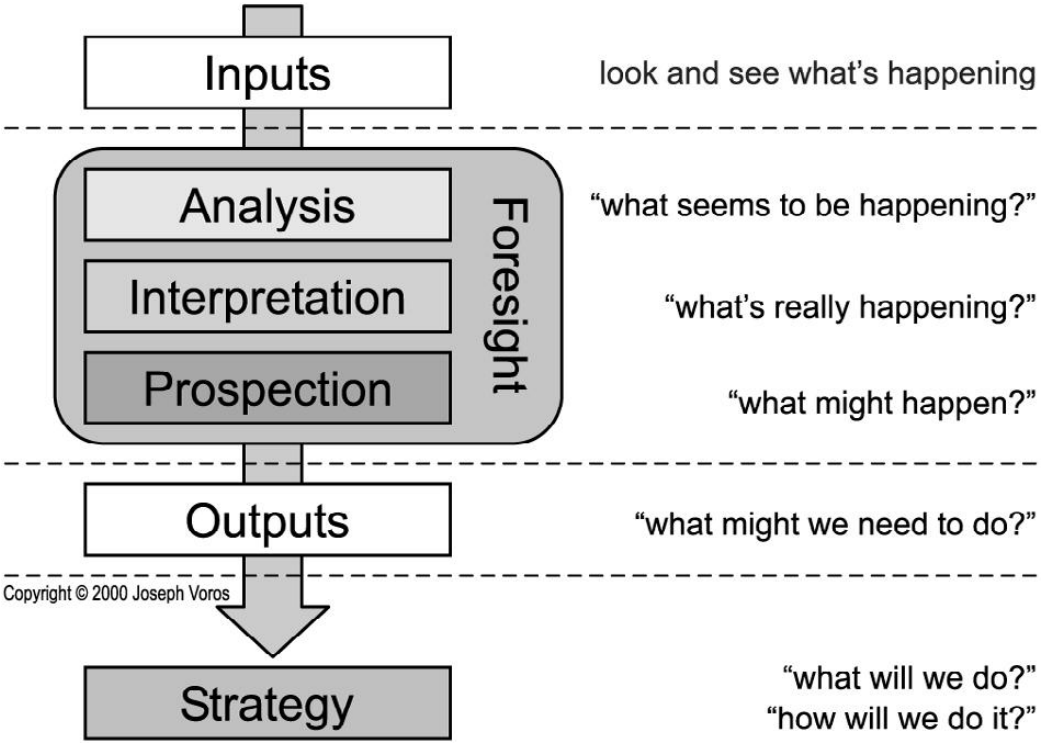

Figure 3. Voros's Generic Foresight Framework.[30]

By using Mintzberg's concepts and the results of previous Foresight studies, Voros developed a widely cited and accepted generic Foresight framework.[31] As depicted in Figure 3, Voros' Foresight framework has several phases, and researchers have to attempt to answer particular questions during each of the phases, utilizing different methodologies. Voros's framework can be summarized as follows:

[29] Ibid.

[30] Ibid., 14.

[31] Ibid., 14–16.

1. Inputs: There is no question in this phase. Here the analysts gather information in order to understand the environment in which they operate.

2. Foresight: The overall step of Foresight has three consecutive sub-steps.

   - Analysis: What seems to be happening?
   - Interpretation: What is really happening?
   - Prospection: What might happen?

3. Outputs: What might we need to do?

4. Strategy: What and how will we do?[32]

C. STRATEGIC FORESIGHT

Voros's generic framework outlines only the main form of Foresight, and Foresight per se is a broad category that contains sub-categories based on the type of methods used, one of which—and possibly the most useful of the three—is strategic Foresight. Among others, Kuosa distinguishes three Foresight actions: the participatory, deskwork, and strategic categories of Foresight:

- Participatory Foresight applies "broad stakeholder involvement and empowerment in a desired futures visioning, anticipation and co-designing process;" its main aim is to help to avoid misunderstandings and promote communication to achieve a "deeper mutual understanding" of the future between certain people.[33]

- Deskwork Foresight is the academic approach to Foresight, where scholar(s) conduct research usually without any collaboration with practitioners and stakeholders so that scholars can "reveal and overcome dogmatism, compulsion, and domination in order to attain more rational social institutions and relations."[34]

- Strategic Foresight provides "strategically viable policy alternatives" for decision makers either in the public or private sector in order to help them "win political, military or economic battles."[35] Accordingly, strategic Foresight is always a highly

[32] Ibid., 14–16.

[33] Kuosa, *Towards Strategic Intelligence,* 38.

[34] Ibid.

[35] Kuosa, *The Evolution of Strategic Foresight,* 12.

> customer-oriented project that comprises all the elements of strategic analysis, usually with an emphasis on long-term issues. Strategic Foresight can be either participatory or deskwork and also can combine the two.[36]

While depth understanding and rational approaches are important, strategic Foresight can combine or utilize participatory Foresight and/or deskwork Foresight, and strategic Foresight always contains alternatives as well. So, what exactly is strategic Foresight again, and why is it useful? One of the several definitions comes from Richard A. Slaughter, who defines strategic Foresight as follows:

> Strategic Foresight is the ability to create and maintain a high-quality, coherent and functional forward view, and to use the insights arising in useful organisational ways. For example to detect adverse conditions, guide policy, shape strategy, and to explore new markets, products and services. It represents a fusion of futures methods with those of strategic management.[37]

Slaughter gives three main reasons for strategic Foresight's usefulness on an organizational level.[38] First, strategic Foresight helps organizations to get out from the cultural trap of "Western worldview and industrial ideology" during the analyses.[39] Slaughter points out that organizations are usually stuck in "short-term, bottom-line thinking" influenced mostly by "mainstream economists" and "conventional empiricists" representing the Western worldview.[40] Strategic Foresight provides an opportunity for organizations to distance themselves from these influences and "grasp some of the major 'big picture' concerns about human purposes, cultural evolution and sustainability."[41]

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[36] Kuosa, *Towards Strategic Intelligence,* 38.

[37] Richard A. Slaughter, "Future Studies as an Intellectual and Applied Discipline," in *Advancing Futures: Futures Studies in Higher Education*, ed. by James A. Dator (Westport: Praeger, 2002), 104.

[38] Interestingly, in terms of the usefulness of strategic Foresight no new arguments have emerged for the last 15 years. A good example for this is the literature review of the following article: Gloria Appiah and David Sarpong. "On the Influence of Organizational Routines on Strategic Foresight," *Foresight* 17, no. 5 (2015): 514–517.

[39] Slaughter, "Future Studies," 104.

[40] Ibid.

[41] Ibid., 104–105.

Second, in addition to Foresight's useful ability to consider big picture concerns without undue influence, Slaughter highlights that strategic Foresight offers enormous advantages for organizations not only by studying future long-term issues, but also short- and medium-term phenomena.[42] He suggests that, by using different strategic Foresight methods, it is possible to recognize "signals" from the operating environment, which may trigger the exploration of new assumptions in organizations. Thus, organizations can start to develop alternative responses to newly perceived possible future conditions earlier, and, accordingly, their reaction time can be reduced as "near term future ceases to be an abstraction."[43] In my understanding, this aspect of Foresight provides the most relevant practical benefit for organizations.

Third, strategic Foresight contributes new ideas in several directions, according to Slaughter. Strategic Foresight contributes to managements by providing: "insights into new industries, new ways of solving old problems, new sources of impact-free wealth-creation, [and] the grounds of new business and civil cultures."[44] Slaughter also acknowledges that, although these three aspects are highly useful, organizations will not be able to foresee everything. However, his core argument stands: that organizations that conduct strategic Foresight will have a better chance to exploit opportunities and mitigate threats, as they will be able to reduce the uncertainties of the future.[45]

Chapter II introduced and explored the different terms regarding Futures Studies, specifically Foresight. The chapter pointed out that Foresight is only one form of future research, and that it has transformed and developed over the last 60–70 years. Methods other than Foresight became prevalent in the 1950s; however, with the increasing need for strategic thinking, strategic Foresight could become relevant again, if and when strategic management creates the space for the entire Foresight process. Janos Voros developed a widely-accepted generic Foresight framework, the one that the thesis will utilize in Chapter V

[42] Ibid., 105.

[43] Ibid.

[44] Ibid.

[45] Ibid., 106.

First, however, in Chapter III, the thesis examines how strategic Foresight has already been utilized at the HUN MoD. Strategic Foresight likely continues to be the most practical version of Foresight for the HUN MoD's needs since, as Chapter II demonstrated, Foresight attempts to provide a holistic view about long-term possible futures for decision-makers in order to avoid threats and exploit opportunities.

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III. STRATEGIC FORESIGHT AT THE HUNGARIAN MINISTRY OF DEFENSE

While Chapter II defined and gave an overview of the usefulness of strategic Foresight, Chapter III explores the HUN MoD's 2013–2014 strategic Foresight process and its results. First, Chapter III briefly delineates why and how Hungary's strategic Foresight process was created, then describes the method. The chapter then introduces the main results.

A. STRATEGIC FORESIGHT AT THE HUNGARIAN MINISTRY OF DEFENSE BEFORE 2012

After the fall of communism in 1990, the HUN MoD lacked both the expertise and experience to develop appropriate strategic plans. As a member of the Warsaw Pact, the Hungarian military had been directly subordinated to the Soviet High Command for almost 40 years, thus the HUN MoD did not, nor was it allowed to, formulate its own defense policies and plans during the Cold War. Hungary felt those consequences throughout most of the 1990s because "two largely incompetent [domestic] groups" were facing each other during that time.[46] The knowledge of one group, the military officers at the HUN MoD, had become obsolete after the Cold War as they had been trained in the Soviet system, and the other group, the newly arriving civilians, equally did not possess appropriate knowledge of defense.[47] Despite these circumstances, the leadership of the HUN MoD quickly realized that the Communist-based system would not work anymore, and, in the early 1990s, experts of the General Staff began to study Western defense planning and management methods. Although the HUN MoD's defense planning system developed steadily for the next 20 years, and strategic guidance became institutionalized, HUN MoD strategic analysis overall and strategic Foresight in particular remained weak.

Some of that weakness likely resulted because, after joining the North Atlantic Treaty Organization (NATO) in 1999, the HUN MoD leadership intended to adapt

[46] Pál Dunay, "The Half-Hearted Transformation of the Hungarian Military," *European Security* 14, no. 1 (2005): 21.

[47] Ibid.

NATO requirements on every level including defense policy aspects. HUN MoD therefore did not see development of national strategic guidance as a pressing issue. Accordingly, in the 2000s, Hungary often accepted NATO defense policy guidelines without debate and uncritically followed NATO's capability development goals,[48] proposed to Hungary by the NATO International Staff via the NATO Defense Planning Process. According to my understanding, the uncontested acceptance of NATO defense policies happened partially because, as a new NATO member, Hungary wanted to prove that it was a reliable ally and partially because the HUN MoD's organizational culture suggested that the MoD had to follow the requests from the center of the Alliance (Brussels) as it had had to in the Warsaw Pact (Moscow). Among these circumstances, well-defined strategic guidance and independent strategic Foresight did not seem important, because strategic guidance came directly from NATO and the HUN MoD had "only" to implement it.

In 2012, the Hungarian government initiated a necessary reform process regarding strategic management.[49] The reform intended to improve the governmental strategic management system by harmonizing and standardizing the development and execution of strategic documents in every ministry including the HUN MoD. To accommodate the government decree, the HUN MoD executed a huge lessons-learned project concerning its strategic management system. The project revealed that strategic Foresight did exist, but it was *ad hoc* and a somewhat neglected activity, neither conducted via a rigorous methodology nor organized in a structured way.[50] Ad hoc strategic Foresight had resulted in discrepancies among HUN MoD departments, as different analytical communities within the organization did not necessarily share the same view about the international security environment, causing inconsistencies among the different phases of defense planning.[51]

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[48] They were called Force Goals and later Capability Goals in the NATO Defense Planning Process.

[49] Government Decree No. 38/2012 (III. 12.) on the governmental strategic planning system.

[50] Bence Németh, "A PESTEM és PMESII Stratégiai Elemző Rendszerek összehasonlítása: A Honvédelmi Minisztérium új Stratégiai értékelő Rendszere," *Felderítő Szemle* 13, no. 1 (2014): 127.

[51] Ibid.

B. DEVELOPMENT OF THE NEW FORESIGHT PROCESS AND STRATEGIC ANALYSIS GROUP (SAG)

The task of developing a new Foresight process belonged to the Defense Planning Department (DPD), and the DPD decided to develop a sophisticated Foresight methodology and involve all intended users into the Foresight process. First, the DPD realized that it needed to have a rigorous methodology in order to make the process more robust, structured, and reliable.[52] Second, all the stakeholders and intended users of the products of Foresight (the analytic communities and the General Staff) had to be involved in the strategic Foresight process. By involving all users, the Foresight process could create synergies by using the unique analytic capabilities of different departments at the HUN MoD. In addition, differing views of analysts could be discussed so that any emerging conflicts between expert communities could be solved during the strategic Foresight analysis process rather than after.[53] Furthermore, Foresight could be fine-tuned to its users' needs by involving them in the process from the start.[54]

The DPD created two subsequent working groups. First, for the development and testing of the Foresight process, a working group was created with experts from the DPD, scholars from the Center for Strategic and Defense Studies (Budapest), and analysts from the Military National Security Service. The working group developed and tested the Foresight methodology between February and July 2013. When the methodology was deemed ready, a new working group, the so-called Strategic Analysis Group (SAG), was established that included the members of the previous working group. Additionally, analysts of the intelligence department of the General Staff (J2), operational planners of the General Staff (J3), and experts of the Ministry of Foreign Affairs were also invited to participate in the Foresight process. While the J2 joined the SAG, the J3 and the Ministry of Foreign Affairs opted for being observers only rather than active participants of the process.

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[52] The author of the thesis worked as a senior strategic analyst at the DPD and the SAG that time, and this statement stems from his own observations.

[53] Ibid.

[54] Németh, "A PESTEM és PMESII," 126–128.

With the members in place, the SAG began the analysis process. During the summer of 2013, the members of the SAG conducted a literature review analyzing dozens of strategic documents and Foresight analyses from all around the world (including from OECD, Red Cross, CIA, NATO, UN, as well as strategic documents from other nations).[55] Additionally, domain-specific experts (including in IT, technology, demography, and energy) and also regional-specific external experts were invited from both the public and private sectors to give briefings on areas where the SAG felt gaps in its knowledge existed.[56] The actual analytical work of strategic Foresight began after that, in September 2013, and the process was finished in April 2014.

The HUN MoD's strategic Foresight methodology was based on an improved version of PEST analysis. PEST analysis, first introduced by Francis J. Aguilar in 1967, is a macro-environmental analytical tool focusing on Political, Economic, Social, Technology (PEST) factors of the environment in which the organization concerned operates.[57] For the last 50 years, different versions of PEST analysis have emerged, and the four original factors have often been complemented by new ones. Probably, the most prevalent one is the PESTLE or PESTEL analysis,[58] which takes into consideration the Legal and Environmental factors of the environment in addition to the original four factors. The HUN MoD'S SAG added the Environmental and Military factors to the original framework and called their version of PEST analysis PESTEM. HUN MoD experts deemed the environmental factor highly important, because they believed that the effects of the global climate change would not only affect the operational landscape where Hungarian soldiers would have to operate in the future, but that the effects might also have global political implications and would likely also generate more natural disasters in Hungary.[59] The military aspect also seemed obvious, since a Ministry of

[55] Ibid., 141.

[56] Ibid.

[57] Francis J. Aguilar, *Scanning the Business Environment* (New York: Macmillan, 1967).

[58] Among others, see: David Williamson, *Strategic Management and Business Analysis* (Amsterdam: Butterworth-Heineman, 2004), 84–90.; Thomas Del Marmol, *PESTLE Analysis* (Brussels: Lemaitre Publishing, 2015).

[59] Németh, "A PESTEM és PMESII," 129.

Defense should essentially be interested in defense related trends of the macro-environment.

Furthermore, the HUN MoD introduced shifting geographic foci to the analysis—four altogether—and, at the end of the process, used a prioritization technique. The analysis's four geographic foci were Global, European, Regional (neighbors of Hungary), and National geographic areas (see Figure 4).[60] Regarding the last one, the question may emerge as to why a macro-level environmental analysis of a nation's ministry of defense would study the national aspects, too? The reason for including Hungarian National geographic areas was that the SAG wanted to discover, *inter alia*, how Hungarian demographic changes, domestic political trends, and expected natural disasters could affect the HUN MoD and the Hungarian Defense Force (HDF).[61]

	Global	European	Regional	National
Political				
Economic				
Social				
Technological				
Environmental				
Military				

Figure 4. PESTEM Analysis for the HUN MoD

By applying the PESTEM framework, the SAG intended to identify the drivers and trends that would affect Hungarian defense until 2030. The difference between a driver and a trend is that while a driver "is the agent or factor, which drives a change forward," a trend "is a flow of transformations that cannot be changed easily."[62] For instance, Kuosa deems the U.S. space program as a driver which pushed several

60 Németh, "A PESTEM és PMESII," 129–131.

61 Hungarian Defence Force is the official name of the Hungarian armed forces.

62 Kuosa, *The Evolution of Strategic Foresight,* 36–37.

technological developments to achieve strategic goals, like sending men to the Moon.[63] On the other hand, according to Kuosa, trends can be usually identified by "statistics or collective agreement," for instance, the concept that the societies of Western countries are ageing.[64]

In order to evaluate all possible drivers and trends, the SAG created a step-by-step process. First, in order to get a pool of drivers and trends as inclusive as possible, the SAG asked every participating organization to identify drivers and trends separately based on its own views and focus areas. The five actively participating organizations identified altogether more than 700 drivers and trends in this first round. After a series of joint sessions, the number of drivers and trends were reduced to a manageable 168 by eliminating duplications, developing a common lexicon, and creating draft priorities. Once the drivers and trends were properly identified, the SAG next needed to prioritize them. During the development and testing of the methodology, experts had agreed that, for the final analysis, they would use only the drivers and trends with both the highest probability and the highest impact on Hungarian defense. Accordingly, in order to prioritize the drivers and trends, every participating organization had to evaluate each of the 168, listing one value that that indicated the impact level and a second that indicated the probability level. For both values, a zero to ten scale was used where ten represented the highest impact or probability. The first number always described the particular organization's view regarding the possible *impact* of every driver and trend on Hungarian defense until 2030, while the second number reflected the organization's opinion regarding the *probability* of every driver and trend affecting Hungarian defense until 2030. After every participating organization finished its individual prioritization, the SAG collected results and, based on the, numbers provided, created a mean average for each impact and each probability of every driver and trend.[65]

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[63] Ibid., 36.

[64] Ibid., 37.

[65] Németh, "A PESTEM és PMESII," 129–135.

Finally, the results were projected on a co-ordinate system (see Figure 5), where Axis X represented impact and Axis Y represented probability. Thereafter, the SAG focused solely on the drivers and trends that were both "High Impact, High Probability" quadrant of the co-ordinate system as they were deemed the most influential for Hungarian defense. That last step in the prioritization process reduced the number of drivers and trends from 168 to 75.[66]

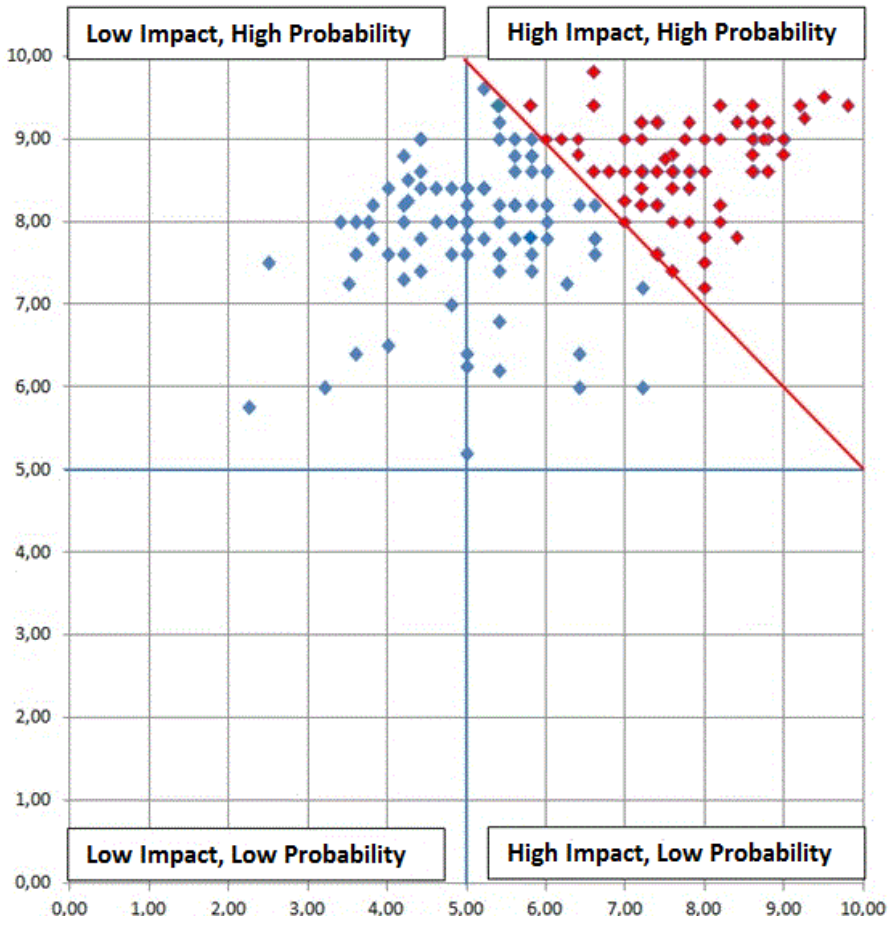

Figure 5. Impact and Probability of Drivers and Trends.

In the final step of the strategic Foresight analysis, the SAG analyzed and grouped the 75 by using issue trees and finding common narratives among the possible drivers and

[66] We can see that there are no drivers on the bottom part of the coordinate system; this was the result of the pre-prioritization and the eliminating of duplications, which was mentioned earlier.

trends. The SAG then drafted a final report detailed in ten chapters that also reflected on the groupings created for the drivers and trends. In addition, the report's Executive Summary presented the main findings as threats and opportunities for the Hungarian defense until 2030. The final version of the document was submitted in Summer 2014.[67]

C. RESULTS OF THE FORESIGHT PROCESS

The SAG's strategic Foresight analysis identified ten main themes:[68]

1. Changes in the international security environment;
2. Decrease of the weight of Western-led international organizations;
3. Slow economic recovery after the financial crisis and its implications;
4. Changing willingness of using military power;
5. The transformation of traditional military challenges;
6. The need for improving the military public administration;
7. Societal and demographic challenges;
8. Technology dependence;
9. Climate change and its implications;
10. Increasing activity of national security services.

The themes are obviously were very broad topics, thus every main theme had several sub-topics, each elaborated in the Foresight report. This thesis focuses on two of these sub-topics for several reasons: they directly relate to the illustrated cases; they help illuminate certain shortcomings of the Foresight process; and their analysis accordingly provides a good starting point for improving the HUN MoD's strategic Foresight method.

Both of these sub-topics belong to the first main theme: "Changes in the international security environment." Within the SAG report, the main purpose of the chapter that covers "Changes in the international security environment" was to describe the major trends and drivers of the international security environment that had both a high

[67] Németh, "A PESTEM és PMESII," 129–135.

[68] The Foresight report was not classified but was not released to the public in a written form either. The results were communicated to analysts and experts outside the MoD in presentations.

probability and a high likelihood of directly affecting directly Hungary's national security and thus present the opportunities and threats that the Hungarian defense sector would likely have to deal with if these events took place. The Hungarian analysts, among others, agreed that East Asia's economic and military role would increase steadily, thus making it likely that rebalancing efforts from the United States would continue, leading to an ever-lessening U.S. attention toward Europe. Even the current Russian interventions in Ukraine would not stop this trend, although the Russian behavior can slow it down. Russia would likely become even more desperate to maintain its big power status and its dominant position in the post-Soviet area and would likely be willing to underpin its intention by military force as actually happened in Georgia and in Ukraine.

The SAG report identified other potential changes to the international security environment as well, including in the Balkans, the Middle East, and Africa, summarized as follows. The number of unstable and failed states globally will likely grow, which may destabilize different regions. Certain groups will exploit this situation and will export their conflicts to other parts of the world. The Balkans remains unstable in many aspects and, because of its proximity to Hungary, any negative development in the Balkans may directly impact Hungarian security. Many countries of the MENA region (Middle East and North Africa) will likely experience a high level of instability following the Arab Spring, further weakening the national institutions and thus likely increasing opportunities for extremists to increase their numbers and strengthen their positions. Also, many regions of sub-Saharan Africa may become more and more unstable (partly as a consequence of the negative developments in the MENA region), and their weak security and armed forces will not always be capable of handling terrorism and warlords. These developments in the MENA region and sub-Saharan Africa will likely create mass migration that then may increase migration pressure on Europe. Globally, the competition for the exploitation of the "global commons"[69] will likely increase. Although energy

[69] According to the United Nations Environment Programme (UNEP), "the 'Global Commons' refers to resource domains or areas that lie outside of the political reach of any one nation State. Thus international law identifies four global commons namely: the High Seas; the Atmosphere; Antarctica; and, Outer Space." Source: "IEG of the Global Commons," United Nations Environment Programme, Accessed May 24, 2016. http://www.unep.org/delc/GlobalCommons/tabid/54404/.

demands will grow, the dynamics of energy related international relations will drastically change in the next decade due to new and emerging technologies.

The brief summary of the SAG report's first chapter previews some of the main conclusions of the document, but, of course, these topics were elaborated in detail within the report. The other nine chapters, which introduced the other main themes, similarly described several sub-topics that relate to their respective themes. While Chapter III examined the reasoning behind the step-by-step process of, and the successful report generation of the Hungarian Ministry of Defense's recent strategic Foresight process, Chapter IV examines the shortcomings of the same process by examining two case studies that directly relate to two of the sub-topics of "Change in the international security environment."

IV. SHORTCOMINGS OF THE STRATEGIC FORESIGHT PROCESS AT THE HUNGARIAN MINISTRY OF DEFENSE

Although the HUN MoD's strategic Foresight report highlighted some very important trends, two issues emerged quickly during the final drafting phase and right after the release of the final report in 2014–2015 that both demonstrated shortcomings in the Foresight process. In February 2014, Russia intervened in Ukraine. Then, in the summer and autumn of 2015, the migration crisis culminated. Interestingly, the analysts of the Hungarian MoD more or less foresaw both issues, but they missed the timing of the Russian intervention and they did not really believe that the migration crisis would happen let alone that it would affect Hungary on a large scale, despite the fact that they explicitly stated that likelihood in the Foresight report. Both the Russian intervention in Ukraine and the migration crisis had a huge impact on the HUN MoD and the HDF, thus it is worth analyzing both cases. While Chapter III detailed the strategic process itself, Chapter IV introduces how the analysts considered and what kind of conclusions they drew regarding Russian aggression and the migration crisis within their Foresight process. The chapter also compares the analysts' conclusions with the actual events and shows how the Ukrainian and migration crises affected the Hungarian defense sector.

A. RUSSIAN INTERVENTION IN UKRAINE

1. What did the SAG think about this issue?

As mentioned earlier, the Foresight process began during the summer of 2013 and the final version of the Foresight report was released one year later. Originally, the release of the final report was expected in early 2014, but the events in Ukraine overran this intention. The prioritization of the trends and drivers were ready at the end of 2013, and the SAG grouped them around major themes in the first month of 2014. The drafting of the report had already begun when Russia occupied Crimea in late February 2014, but the events in Ukraine put the report on hold since the SAG felt it necessary to analyze the events and their potential impact on the conclusions of the Foresight report. The sub-topic of a resurgent Russia in the first main theme had already been identified during the

Foresight process, before the Ukraine events; the Hungarian analysts were aware that Russia would likely become more assertive/aggressive in the coming years, and that might include the application of military force on Moscow's part. However, the analysts did not think Russian military operations would happen so soon and neither did they specify *where* Russian military intervention might happen.[70]

The SAG focused on two main issues regarding Russia during their strategic Foresight process. First, the SAG was certain that Russia would remain a major player in European politics in the coming 15 years, which would not have been such a certainty in the previous 10 or 20 years. Despite the prevalent and well-known demographic[71] and also economic[72] weaknesses of Russia, Moscow could create huge foreign exchange reserves and improve the standard of living in the country. In addition, Russian leadership seemed willing to pay the price for symbolism by hosting events that could help to boost its soft-power and highlight its "greatness" like the Winter Olympic Games 2014, the Ice Hockey World Cup 2016, and the Soccer World Cup 2018.[73] Furthermore, during the 2000s, Vladimir Putin's Russia had become more and more confident in representing its interests via different means. For instance, Moscow used natural gas as a tool of coercion against Ukraine several times, executed a series of massive cyber attacks against Estonia in 2007, and also waged a successful war against Georgia in 2008. Simultaneously, Russia confronted Western countries regarding several issues including ballistic missile defense and treaty disputes, among others, growing more and more assertive.[74] All of the above examples increased the SAG's certainty that Russia would likely continue to increase its assertive power stance.

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[70] The author of the thesis worked as a senior strategic analyst at the DPD and the SAG that time, and this statement stems from his own observations.

[71] Julie DaVanzo and Gwendolyn Farnsworth, *Russia's Demographic "Crisis"* (Santa Monica, CA: RAND, 1996).

[72] Vladimir Mau, "Strengths and Weaknesses of the Russian Economy," *Russia in Global Affairs* 6, no. 1 (2007).

[73] Countries have to apply for the hosting rights of these world events several years before the actual events are organized. For instance, Russia was awarded the hosting rights of the 2018 soccer world cup in 2010.

[74] Laurence Peter, "Why Nato-Russia Relations Soured before Ukraine," BBC, September 3, 2014. http://www.bbc.com/news/world-europe-29030744.

The SAG also focused on Russian military modernization. In 2008, Russia decisively won its war against Georgia in five days.[75] However, the war also revealed several major weaknesses of the Russian armed forces, most notably the ineffectiveness of its command and control system, several technological weaknesses, and significant problems with its military personnel.[76] As a result, Moscow began a major military reform process that, among other things, developed a new military doctrine, aimed at increasing the numbers of professional troops and also increasing the defense budget so that the Kremlin funded resources for better training, maintenance, and large-scale procurements. Perhaps the most relevant sign of Russia's increased seriousness regarding military modernization came in 2010 when Russia started a weapons-modernization plan that intended to spend 720 billion dollars on modern weapon systems and equipment within the next 10-year period.[77] Not surprisingly, the Russian defense budget doubled between 2007 and 2014.[78] Russia also published a new, modern military doctrine in 2010,[79] which took into consideration the experiences of the Georgian war and also the newest developments regarding international security.[80]

The SAG was thus aware of both the Russian political willingness to represent national interests via different means (including military force) and its rapidly improving military capabilities. However, because the Russian military reforms were still in their early phase, the SAG deemed that Russia would need more time to achieve its modernization plan before beginning another major military intervention.

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[75] Athena Bryce-Rogers, "Russian Military Reform in the Aftermath of the 2008 Russia-Georgia War," *Demokratizatsiya* 21, no. 3 (2013): 339–368.

[76] Ibid.

[77] "Putin's New Model Army," *The Economist*, May 24, 2014. http://www.economist.com/news/europe/21602743-money-and-reform-have-given-russia-armed-forces-it-can-use-putins-new-model-army.

[78] Ibid.

[79] The Military Doctrine of the Russian Federation [Approved by Russian Federation presidential edict]. (2010, February 5).

[80] To the surprise of many that time, the Russian military doctrine of 2010 named NATO expansion or moving NATO military infrastructure closer to Russia as the most important military threat to Russia. Ibid.

2. What happened and how did it affect the Hungarian Defense Sector?

To the surprise of most of the SAG analysts, Russia occupied Crimea swiftly and bloodlessly in February and March 2014. According to the BBC, the "annexation of Crimea was the smoothest invasion of modern times. It was over before the outside world realised it had even started."[81] Russian military troops, not wearing "national or unit markings, nor badges of rank," and armed pro-Russian volunteers essentially seized Crimea by establishing checkpoints and disarming the local Ukrainian security forces.[82] Also in March 2014, pro-Russian protesters and insurgents appeared in the Eastern part of Ukraine in the territory of Donbass, where tensions heightened between pro-Russian and pro-Ukrainian troops. The tensions escalated into a bloody conflict, and both Russian and Ukrainian troops took part in the fights. Vladimir Putin never admitted officially that he sent regular troops to the Donbass territory,[83] but many independent sources provided persuasive evidence that Russia was involved directly and militarily in the conflict.[84]

Despite the fact that Hungary shares a border with Ukraine, Hungarians did not feel affected by the conflict right away. However, Hungary's NATO allies who share a border with Russia (Estonia, Latvia, Lithuania, and Poland), on the other hand, were highly concerned with the Russian military intervention in Ukraine. As an answer to the events in Ukraine and for the purpose of assuring the allies who were concerned regarding Russian aggressive behavior, the heads of states and heads of governments of NATO countries agreed on several measures during the Wales Summit in 2014.[85] While the conflict itself had not created a direct effect on Hungary, the agreement that resulted

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[81] John Simpson, "Russia's Crimea Plan Detailed, Secret and Successful," BBC, March 19, 2014. http://www.bbc.com/news/world-europe-26644082.

[82] Ibid.

[83] Shaun Walker, "Putin Admits Russian Military Presence in Ukraine for First Time." The Guardian, December 17, 2015. http://www.theguardian.com/world/2015/dec/17/vladimir-putin-admits-russian-military-presence-ukraine.

[84] See, for example, "Ukraine: Mounting Evidence of War Crimes and Russian Involvement," Amnesty International, September 7, 2014. https://www.amnesty.org/en/latest/news/2014/09/ukraine-mounting-evidence-war-crimes-and-russian-involvement/; "Selfie Soldiers: Russia Checks in to Ukraine.," Vice, June 16, 2015. https://news.vice.com/video/selfie-soldiers-russia-checks-in-to-ukraine.

[85] *Wales Summit Declaration*, September 5, 2014. Issued by the Heads of State and Government participating in the meeting of the North Atlantic Council in Wales, United Kingdom, Newport and Cardiff.

from the Wales Summit then meant that the Russian intervention significantly affected the Hungarian defense sector in several aspects. These direct results included: that, together with Germany, Hungary took over the air policing tasks of the Baltic States for three months in September 2015; that a multinational NATO command center will be set up in Hungary;[86] that Budapest sent troops to military exercises in the Baltic states; that Hungary invested more into its military infrastructure; and that, together with NATO, Hungary reviewed and upgraded its military plans.[87] In addition, thanks to the increased U.S. military presence in Eastern Europe, U.S. troops have been participating more frequently in military exercises in Hungary and will also station tanks and armored vehicles permanently in one of the HDF's bases.[88]

So, clearly, Hungarian analysts did accurately identify the trends regarding future Russian behavior, but they were not specific enough nor did they predict the speed with which Russia would utilize military force. The analysts did not focus on where and when Russia would likely begin a military intervention; rather, they were satisfied with stating the trends and a probability of future Russian military actions. It is true that, even if the analysts could have foreseen the Ukrainian crisis exactly, that strategic Foresight could not have had a significant impact on the Hungarian MoD's plans in advance of the events in Ukraine as there simply wasn't enough time. However, it is crucial to understand the causes of this shortcoming of the Foresight process and find a way to improve so that the Hungarian MoD can be better prepared in the future for events like the Ukrainian crisis that may have significant impact on Hungarian defense.

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[86] *NATO's Readiness Action Plan*, October 2015, Fact Sheet

[87] "The Decisions of the NATO Summit Significantly Improve Hungary's Security," Kormany.hu, September 9, 2014. http://www.kormany.hu/en/the-prime-minister/news/the-decisions-of-the-nato-summit-significantly-improve-hungary-s-security.

[88] "U.S. Army To Station Tanks And Armoured Vehicles In Hungary," *Hungary Today*, July 22, 2015. http://hungarytoday.hu/news/us-army-station-tanks-armoured-vehicles-hungary-57294.

B. MIGRATION CRISIS

1. What did the SAG think about this issue?

In terms of migration, the SAG report explicitly stated that the handling of mass, illegal migration from the MENA and sub-Saharan regions was going to be a significant challenge for Europe in the coming period. Migration had already represented a serious risk both to the Mediterranean countries and specifically to Hungary. The SAG analysts were clear that more and more migrants would come to Europe. The analysts considered both the instability that had emerged after the Arab Spring in the MENA region and especially the devastating effect of the Syrian civil war that had already triggered huge waves of refugees as trends worthy of close attention. Previously, illegal migration affected primarily the Mediterranean countries especially Italy and Greece, the two countries closest to the unstable regions. Migrants had attempted to get to these countries mostly by boat via the Mediterranean Sea, and many of them died trying to reach the shores of Europe. However, from 2012, the number of illegal migrants arriving in Hungary also increased dramatically. While only 2200 migrants were registered in Hungary in 2012, that number increased by nearly twenty times in 2014 (43,000).[89] Accordingly, the dynamics in the MENA region and the trend of the increasing number of migrants showed clearly that migration would create significant problems in Hungary.

Although the analysts at the MoD came to the right conclusion and included their accurate predictions in the Foresight report, they did not believe that migration would affect Hungary seriously probably because Hungary is usually not a target country for migrants, and analysts did not see that changing.[90] Another reason why the analysts did not focus much on migration was that the HDF did not have any assigned tasks regarding migration. Namely, the Hungarian law about defense did not mention any issues that would connect the HDF with a possible involvement in handling mass migration. Previously, for the last 15 to 20 years, the HDF had focused mostly on the participation in

[89] Adrián Magvasi, "Sokkolóak a 2014-es Bevándorlási Adatok," *Alfahír*, January 14, 2015. http://alfahir.hu/sokkoloak_a_2014_es_bevandorlasi_adatok.

[90] The author of the thesis worked as a senior strategic analyst at the DPD and the SAG that time, and this statement stems from his own observations.

NATO and EU missions abroad, and, for domestic purposes, it was used only during disaster relief operations. As migration represented neither a mission nor a natural disaster, no legal framework nor precedent existed that would have alerted the analysts to more cautiously and seriously consider the possible effects of migration on Hungarian defense.

2. What happened and how did it affect the Hungarian Defense Sector?

In 2015, the pace of arrival of migrants to Hungary increased rapidly, resulting in chaotic scenes in various refugee camps, public parks, major railway stations in the capital, and also on highways as thousands began to walk through Hungary en route to Germany. In the first ten months of 2015, the number of migrants that arrived in Hungary reached 360000[91] nearly a ten times increase in less than a year. Hungary thus became one of the main entry points to the EU Schengen Zone for irregular migrants in 2015, and, in the first six months of 2015, Hungary also had the highest number of first time asylum applicants relative to the population among the EU members.[92] The dramatic increase was caused by many migrants opting for the so-called Balkan migrant route instead of the more dangerous routes through the Mediterranean Sea. Most of the migrants did not want to settle down in Hungary; they wanted to travel to more developed EU countries.[93] However, according to EU regulations, they had to register as asylum-seekers in the first EU country they arrived in, and they should have waited for the end of their asylum-seeking process, a process that can last several months. Many migrants did not intend to stay in Hungary for the duration of the asylum-seeking process and, as no border control exists in the EU Schengen Zone, thought they could pass through Hungary relatively easily.[94]

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[91] "Mintegy 357 Ezer Bevándorló érkezett Eddig Magyarországra," *Hirado.hu*, November 12, 2015. http://www.hirado.hu/2015/10/12/357-ezernel-is-tobb-bevandorlo-erkezett-eddig-magyarorszagra/.

[92] "Over 210 000 first time asylum seekers in the EU in the second quarter of 2015," *Eurostat*, September 18, 2015. http://ec.europa.eu/eurostat/documents/2995521/6996925/3–18092015-BP-EN.pdf/b0377f79-f06d-4263-aa5b-cc9b4f6a838f.

[93] Nick Thorpe, "Migrant crisis: Hungary surge as fence slowly rises," BBC, August 24, 2015. http://www.bbc.com/news/world-europe-34043344.

[94] "Europe migrants: Tracing perilous Balkan route to Germany," BBC, August 26, 2015. http://www.bbc.com/news/world-europe-34039968.

In June 2015, faced with waves of migrants, the Hungarian government announced that it would close its border with Serbia—where the vast majority of the migrants entered Hungary—by building a border fence 110 miles long and 4 meters high[95] The HDF was responsible for the construction of the fence. Three months later, in mid-September, the Hungarian government announced that the fence along its southern border with Serbia was complete.[96]

To further ensure the security of the borders, the Hungarian government gave new powers to the police and the military and also changed laws to criminalize migration. New legislation allowed the military to take part in border control activities and gave it the right to use

> coercive weapons designed to cause bodily harm, although in a non-lethal way, unless it cannot be avoided. […] Similar to the police, the use of non-lethal firearms, rubber bullets, pyrotechnics, tear gas grenades, and net guns can be used [by the military].[97]

In September, 4500 Hungarian troops were deployed to the borders within a very short period of time to patrol and strengthen the border fence physically. Furthermore, the Hungarian government declared a state of emergency in the areas affected by mass migration.[98] Right after the closing of the Hungarian/Serbian border, migrants who wanted to enter Hungary clashed with Hungarian police, and the police used tear gas and water canons to disperse the rioters.[99] Thereafter, only a very small number of migrants attempted to enter to Hungary illegally from Serbia, and the vast majority of migrants changed their routes to travel through Croatia.

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[95] Daniel Nolan, "Hungary Orders 100-mile Serbia Border Fence to Keep out Migrants," *The Telegraph,* June 17, 2015. http://www.telegraph.co.uk/news/worldnews/europe/hungary/11680840/Hungary-orders-100-mile-Serbia-border-fence-to-keep-out-migrants.html.

[96] "Lezárták a Röszkei Határt," *Magyar Hírlap*, September 14, 2015. http://magyarhirlap.hu/cikk/35265/Lezartak_a_roszkei_hatart.

[97] "Hungarian Army Given Sweeping Powers Against Migrants," *Defense News*, September 21, 2015. http://www.defensenews.com/story/defense/international/europe/2015/09/21/hungarian-army-given-sweeping-powers-migrants/72575596.

[98] Ibid.

[99] "Migrant crisis: Clashes at Hungary-Serbia border," BBC, September 16, 2015. http://www.bbc.com/news/world-europe-34272765.

A few days later, Croatia began to transport migrants by buses to its Hungarian and Slovenian borders, and Hungarian and Slovenian authorities transported them directly to their respective Austrian borders. At the same time, the HDF began to build a fence on the Hungarian-Croatian border as well. One month later, Hungary announced the completion of the Hungary/Croatia border fence, and thus the border with Croatia also closed to migrants.[100] After this, all of the migrants were diverted towards Croatia and Slovenia, and basically, illegal migration stopped in Hungary. It is important to note that, as a consequence of necessarily stopping the migration crisis, border patrolling and upgrading the border fence became a core function of the HDF. Though both events had significant impacts, the migration crisis has had an even bigger impact on Hungarian defense than did the Russian military intervention in Ukraine.

Using strategic Foresight, the HUN MoD analysts drew accurate conclusions concerning the causes and trends of mass migration on Europe and included the possibility that Hungary would be directly affected. However, despite their own accurate conclusions, somehow even they did not think that it would really happen, and they did not predict any necessary roles for the Hungarian MoD and the HDF. The analysts and decision makers probably focused too much on the existing tasks and did not consider the potential that the legal framework would dramatically shift to include possible HDF tasks in a migration crisis. The Hungarian MoD did not think outside the box in this regard and did not take into consideration that legislation can change rapidly in crisis situations as happened in 2015. As the Hungarian MoD did not further consider the possible effects of mass migration and did not envision new tasks mass migration might generate for Hungarian defense, the HDF initially was not prepared when the crisis did happen. The troops were not trained for the new tasks, plans did not exist, and the HDF lacked certain capabilities as well.[101] In fact, the Hungarian defense minister resigned in September

[100] "Lezárták a Röszkei Határt," *Magyar Hírlap*, September 14, 2015. http://magyarhirlap.hu/cikk/35265/Lezartak_a_roszkei_hatart.

[101] Ukraine: Mounting Evidence of War Crimes and Russian Involvement," Amnesty International, September 7, 2014. https://www.amnesty.org/en/latest/news/2014/09/ukraine-mounting-evidence-war-crimes-and-russian-involvement/.

2015 because the construction of the border fence did not progress appropriately.[102] The events surrounding the migration crisis clearly demonstrate that only the identification of a risk or threat is not enough. The strategic Foresight process needs another step that focuses on future possibilities and plans concerning identified risks, because, if the possible futures do become reality, the organization needs to be prepared.

Chapter IV has demonstrated that both the Russian invasion of Ukraine and the mass migration clearly demonstrate the need for further analysis and improved strategic Foresight, as well as the need for the HUN MoD to take their strategic predictions and the strategic process as a whole quite seriously. Chapter V examines how applying Foresight diagnostic tools will improve the Hungarian Ministry of Defense's strategic Foresight and consequent planning.

[102] "Orbán Elégedetlen Volt Hendével," *Népszabadság,* September 07, 2015. http://nol.hu/belfold/lemondott-hende-csaba-1561711.

V. ANALYSIS OF THE STRATEGIC FORESIGHT PROCESS OF THE HUN MOD

While the previous two chapters showed how the strategic Foresight process of the HUN MoD works, including what kind of results it generated and what kind of shortcomings it had, Chapter V attempts to figure out why these shortcomings might have evolved and how Foresight's diagnostic tools can help. For this purpose, the thesis further details then utilizes Joseph Voros's generic Foresight framework, already briefly described in Chapter II. Voros's framework is widely cited and widely accepted in the Foresight literature, and it is not only a great guide for the process of strategic Foresight, but it also can serve as a diagnostic tool for analyzing the steps of the HUN MoD's already existing Foresight processes. After explaining how Voros's framework can be used as a diagnostic tool, the thesis utilizes said framework to diagnose the cause(s) of the shortcomings examined in Chapter IV. When the diagnosis is ready, the thesis digs deeper, attempting to identify the organizational dynamics at the HUN MoD that may have caused the shortcomings of the Foresight process.

A. VOROS'S GENERIC FORESIGHT FRAMEWORK

As mentioned earlier, Voros used several results of strategic management and Foresight to develop his generic Foresight framework. He took Averil Horton's guide to Foresight[103] as a basis. Horton conceptualized Foresight as a three phase process, where phase one is the input phase (collection, collation, summarization of information), phase two is Foresight ("translation" and interpretation of the summarized knowledge), and phase three is providing outputs and taking actions based on the Foresight results.[104] Applying Mintzberg's separation of strategic thinking and strategic planning,[105] Voros divided Horton's third phase into two steps: outputs and strategy (making).[106] In this

[103] Averil Horton, "A Simple Guide to Successful Foresight," *Foresight* 1, no. 1 (1999): 5–9, doi:10.1108/14636689910802052.

[104] Ibid.

[105] Mintzberg, "The Fall and Rise," 107–114.

[106] Voros,"A Generic Foresight," 13.

way, Voros made clear that strategic Foresight is a strategic thinking activity that ends by providing Foresight results (outputs) to the decision makers. Accordingly, any actions based on the outputs of Foresight are already part of strategic planning. Finally, Voros enriched his framework with Richard Slaughter's concept about Foresight methodologies. Slaughter distinguished four main groups of Foresight methods: 1) input methods; 2) analytic methods; 3) paradigmatic methods; and 4) iterative and exploratory methods.[107] In some cases, Voros could apparently apply Slaughter's Foresight method types directly to the steps of his generic Foresight framework (input methods to the step of inputs, for example); in other cases, Voros had to fine-tune certain steps and methodology categories to match each other (see Figure 6).

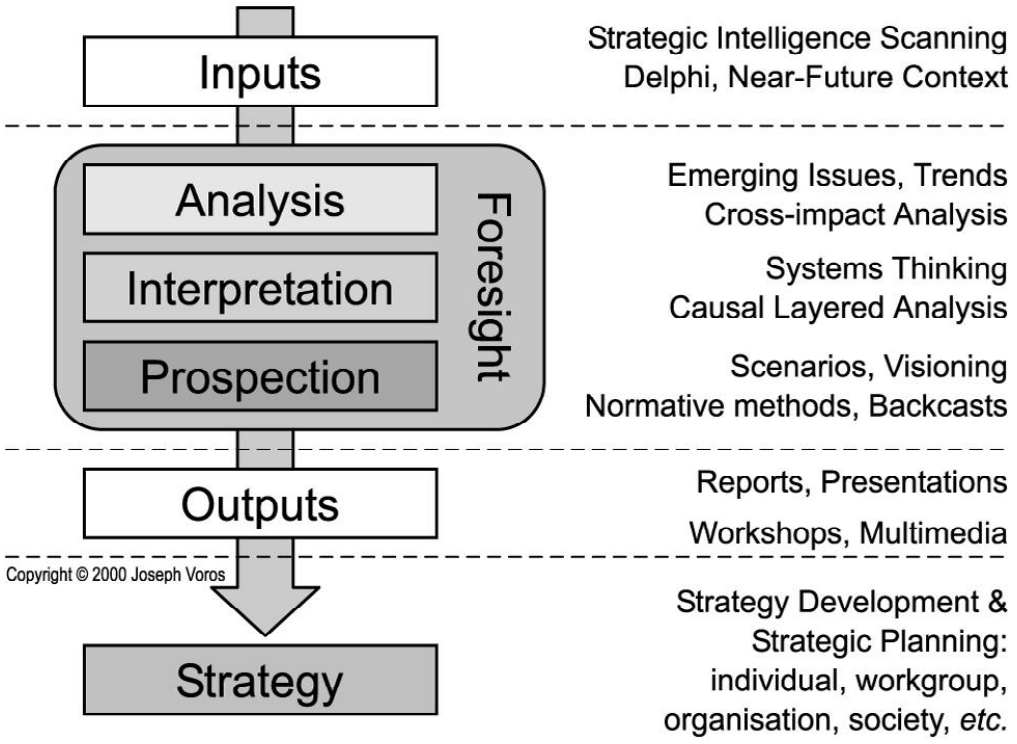

Figure 6. Voros's Foresight Framework, with Some Representative Methodologies Indicated.[108]

[107] Richard A. Slaughter, *Futures for the Third Millennium: Enabling the Forward View*, Sidney: Prospect Media, 1999.

[108] Voros,"A Generic Foresight," 15.

As shown in Figure 6, Voros had created an easily understandable, structured, and pragmatic generic Foresight process. At each phase, it not only asks the questions analysts should be able to answer but also introduces the appropriate activities and possible methods regarding the individual steps. Voros's framework can be summarized as follows.[109]

1. Inputs:

   - *Question:* No question.
   - *Activity:* In this phase, the organization collects and summarizes the relevant information and scans the environment for strategic intelligence.
   - *Methods:* strategic intelligence scanning, Delphi, near-future context, PEST, et cetera.

2. Foresight: This phase is basically the heart of the framework where the conceptual and creative work has to be done in three consecutive steps.

   I. Analysis:

   - *Question:* What seems to be happening?
   - *Activity:* Creating order in the information gathered in the input phase, which is often executed by categorizing the information with the help of different methods.[110] This is a "preliminary stage to more in-depth work, rather than as a stand-alone technique itself."[111]
   - *Methods:* emerging issues, trends analysis, cross-impact analysis, et cetera.

   II. Interpretation:

   - *Question:* What is really happening?
   - *Activity:* The intention here is to gain a more thorough understanding of the knowledge created in the previous steps. Thus, Foresight analysts attempt to dig below the surface to find "deeper structure and insight" concerning their strategic

[109] Ibid., 14–16.

[110] Maree Conway, *An Overview of Foresight Methodologies*, Melbourne: Thinking Futures, 2008. 6.

[111] Voros,"A Generic Foresight," 14.

environment.[112] They may also "challenge the categories used to analyze data, by trying to identify and surface the worldview underpinning those categories."[113]

- *Methods:* systems thinking, causal layered analysis etc.

III. Prospection:

- *Question:* What might happen?
- *Activity:* Voros defines prospection as "the activity of purposefully looking forward to create forward views."[114] Accordingly, different types of alternative futures are taken into consideration and studied in this step. The applied methodologies depend here on the types of futures (see later) to be reviewed.[115] Maree Conway highlights that prospective work has to shift "the mental model of the participants" from the current common knowledge to new possibilities and also shift "the focus and thinking from short term to long term."[116]
- *Methods:* scenarios, visioning, normative methods, backcasts, et cetera.

3. Outputs:

- *Question:* What might we need to do?
- *Activity:* Voros differentiates between tangible and intangible outputs. Tangible outputs are the reports, documents, and options created during the process, while intangible outputs—the more important ones—are the organization's changed views and perceptions about futures and strategic options generated by Foresight.
- *Methods:* reports, presentations, workshops, multimedia, et cetera.

4. Strategy

- *Questions:* What will we do? How will we do it?

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[112] Ibid., 15.

[113] Conway, An Overview of Foresight, 7.

[114] Voros,"A Generic Foresight," 15.

[115] Ibid.

[116] Conway, An Overview of Foresight, 8.

- *Activity:* The Foresight process ends at the output phase, and the strategy phase uses the results of the Foresight process to develop a strategy for the organization.
- *Methods:* strategy development and strategic planning at the individual, workgroup, organizational, and societal levels et cetera.[117]

An integral part of Voros's framework is the distinction between different types of futures. Foresight analysts accept that they are not able to predict the future exactly, thus they often create alternative futures to draw attention to different possible threats and opportunities. Voros points out that, when choosing among different methods in the prospection step, the type of futures the stakeholders intend to generate and study must be considered.[118] Voros argues that, in order to fully consider all possible futures, analysts must first accept the ontological premise that the future is not predetermined and singular but rather that "an infinite variety of potential futures" exist.[119] If analysts or stakeholders do not accept this premise, and instead stick with a predestined view of the future, Foresight becomes "merely an information problem," or merely an attempt to find more accurate information about what will happen in the future. Of course, even in this case the future will not become more predictable, since it is not possible to foresee everything.[120]

Voros describes five types of futures (see Figure 7). Potential futures are the most inclusive ones, as this category contains all futures as yet imagined. Possible futures are the futures we can imagine, and it does not matter how unlikely they are. Plausible futures are the ones that are "considered reasonable by our current understanding of how the world operates."[121] While probable futures, the category of "likely to happen," usually based on linear extension of current trends, events, and phenomena are entirely contained within plausible futures, the reader may notice that the last group of futures,

[117] Voros, A "Generic Foresight," 16.

[118] Ibid.

[119] Ibid.

[120] Ibid.

[121] Ibid. 17.

preferable futures (not based on information but rather on what kind of futures we would like to have) are almost all, but not quite, plausible.

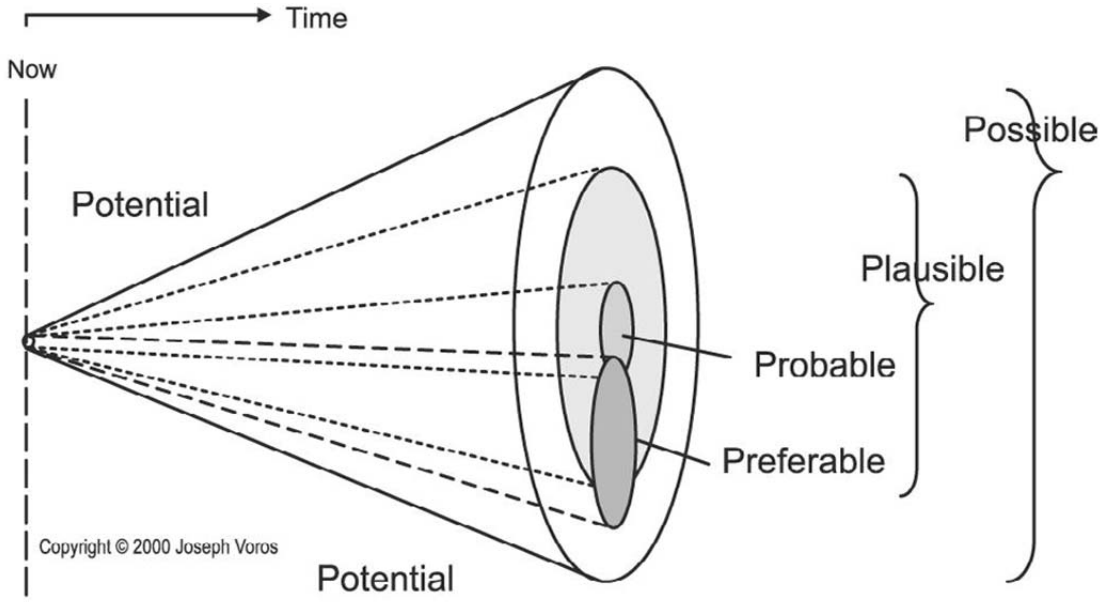

Figure 7. Different Types of Futures According to Voros.[122]

B. VOROS'S FRAMEWORK AS A DIAGNOSTIC TOOL

Voros's framework can be useful as a diagnostic tool to improve Foresight processes. Among other things, it can help to evaluate the logic of the existing Foresight processes, it provides options how and when certain methodologies should be used, and what practices should be applied in the different phases of Foresight. However, in our case, the most important innovation is that Voros developed several diagnostic models for situations when the Foresight process does not include all of the phases of Figure 6.

One of these less-than-complete models is called "reactive strategy" or reactive approach. Reactive approaches occur when an organization reacts directly to the events of its environment without any analysis, interpretation, prospection, and/or outputs (see Figure 8). Basically, the organization reacts "instinctively" usually based on what organizational culture and policy options are embedded into the mental model of the

[122] Ibid.

decision makers of the organization. In acting with reactive approaches rather than on strategic planning, decision makers often believe that they are highly responsive, but they can forget that they are not considering all of their options, thus their response can easily become sub-optimal.[123]

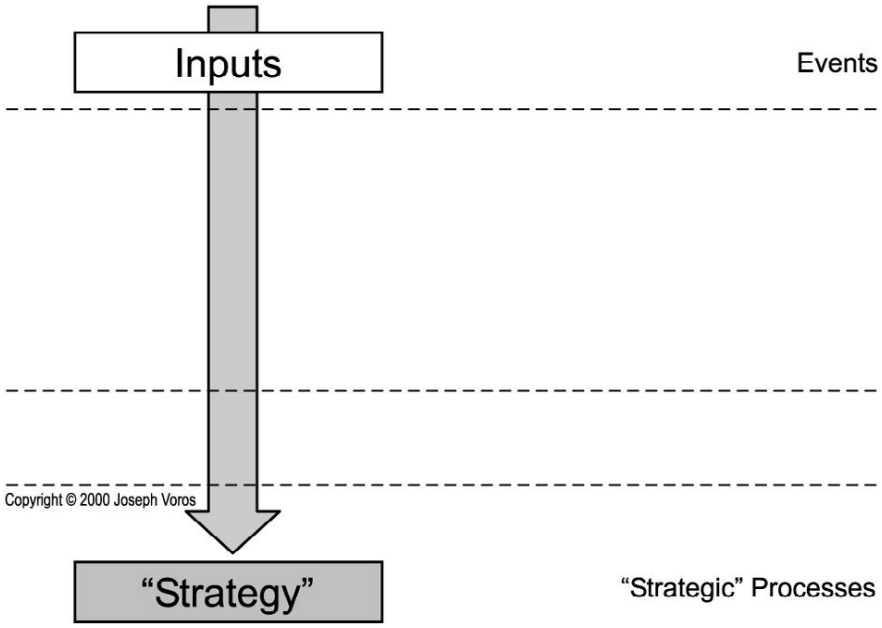

Figure 8. Reactive Approach.[124]

The "shallow Foresight process" (see Figure 9) is another Voros model that does not include all the steps from Figure 6. Voros points out that many organizations function this way. In the shallow Foresight process, the organization analyzes the inputs and recognizes trends or themes of its strategic environment, but the output of their analysis will be "thin." He further highlights that the shallow Foresight process is

> an approach [that] undertakes strategic processes based merely on what seems to be happening in the strategic environment, absent any attempt to look deeper, or to explicitly examine forward views. The strategic options so produced are therefore rather suspect.[125]

[123] Ibid.

[124] Voros,"A Generic Foresight," 18.

[125] Ibid.

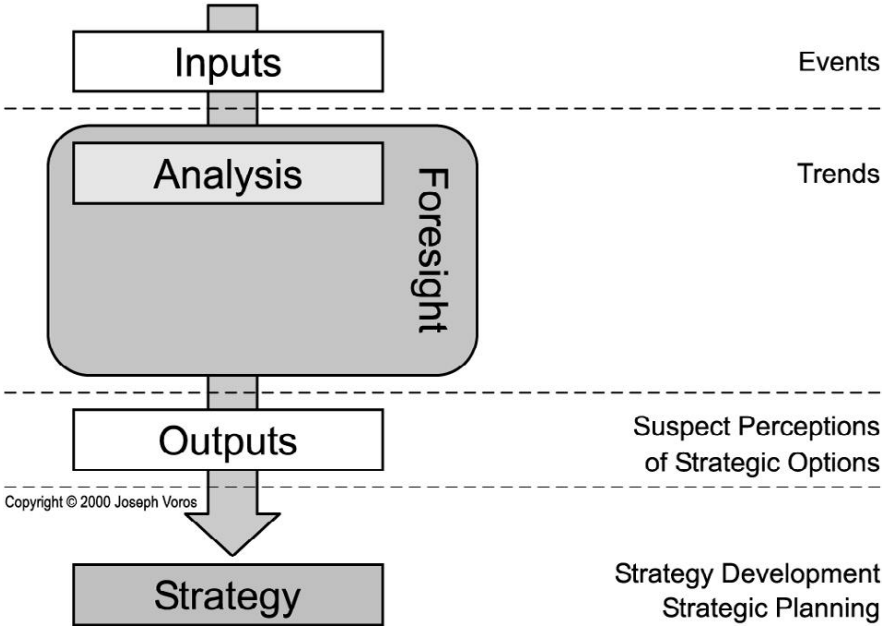

Figure 9. Shallow Foresight Process.[126]

The third model of Foresight that fails to consider each of Voros's steps is the "shallow/narrow" model (see Figure 10). In this case, although analysis is followed by prospection, interpretation is still missing. In most cases, no interpretation means that, based directly on the revealed trends provided by the analysis phase, the analysts are creating "visioning" exercises, scenario planning for instance.[127] Therefore, although analysts are doing forward thinking, their prospection remains narrow, based on a single analysis rather than on an in depth interpretation regarding the question of "what is really happening." According to Voros, the shallow/narrow approach is even more dangerous than the shallow model because analysts will suffer the illusion that they have created a more accurate Foresight. Voros states that "there is essentially no difference in the quality of the strategic options generated by this modification—they are still rather suspect, based as they are on a narrow set of forward views flowing from a shallow and incomplete Foresight process."[128]

[126] Voros,"A Generic Foresight," 19.

[127] Ibid.

[128] Ibid.

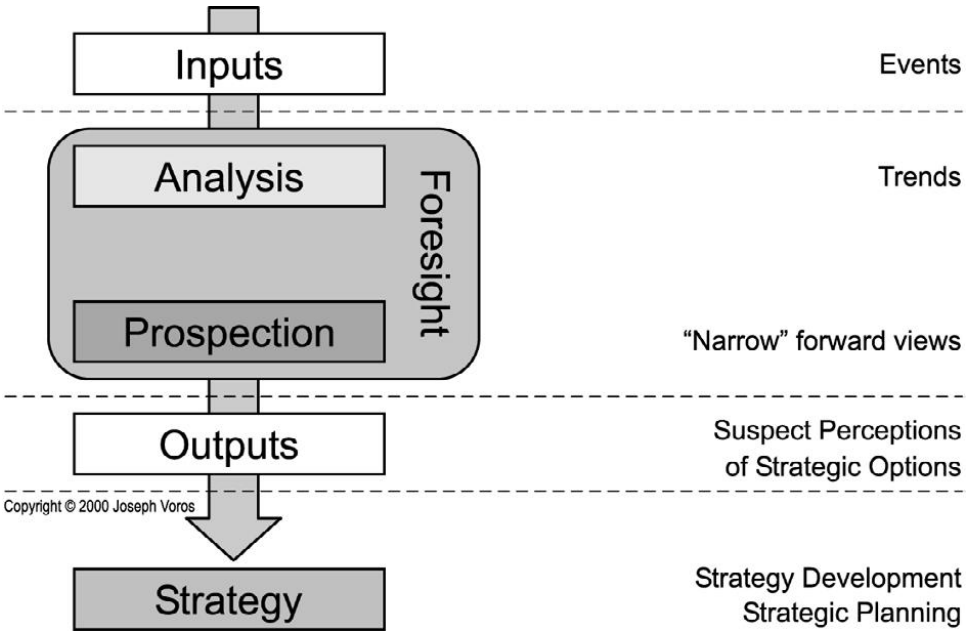

Figure 10. Shallow/Narrow Foresight Process.[129]

C. ANALYSIS OF THE HUN MOD'S STRATEGIC FORESIGHT PROCESS

Now, the thesis analyzes the HUN MoD's strategic Foresight process, with the help of Voros' generic Foresight framework, in order to diagnose the cause(s) of the shortcomings of the HUN MoD's recent strategic Foresight process. As Chapter IV described, the shortcomings included the fact that, although the SAG identified the Russian aggression and the migration crisis, they missed either the timing of the event or did not imagine and therefore plan for their predictions coming true. To discern whether the causes of these issues were methodological, practical, or logical, the thesis studies how the SAG executed the individual phases of Voros's framework based on the HUN MoD's step by step process described in Chapter III.

1. Inputs

In the inputs phase, the participants of a Foresight process gather information and scan the strategic environment. The HUN MoD SAG engaged in gathering and scanning

[129] Ibid., 19.

systematically and extensively, devoting approximately five months in 2013 to the inputs phase. The SAG not only analyzed existing Foresight and strategic documents, it reviewed literature on several topics and also consulted with domain-specific external experts. In addition, SAG used the PESTEM method to identify trends and drivers on different geographic levels (Global, European, Regional, National) and subject areas (political, economic, social, technology, environment, military). Accordingly, the *SAG appropriately engaged in the inputs phase.*

2. Foresight

a. Analysis

The main task in the analysis phase is to create order among the huge amount of information gathered during the input phase. To analyze the data, the SAG used different methods. First, utilizing the PESTEM method, the SAG created a categorization in terms of geographic areas and subjects. SAG made a further categorization step by prioritizing trends and drivers based on their probability and impact. Finally, the SAG grouped the most relevant variables into ten main themes. The SAG used three levels of categorization (PESTEM, prioritization, and themes) to create order among the information gathered and also provided answers to the question of the analysis step: "what seems to be happening." Based on the analysis steps above, the *SAG analyzed the information collected in the inputs phase thoroughly.*

b. Interpretation

In the interpretation step, analysts should generate insight about knowledge acquired by the inputs and analysis steps. However, *SAG missed this step.*

c. Prospection

In the prospection step, analysts purposefully study alternative futures to kick the organization out from its comfort zone, shifting people's mental models out of common beliefs and shared perceptions of the future, making room for the possible of alternative potential futures. Rather than applying more out of the box thinking, SAG looked

exclusively for the most probable future, neither considering alternative futures possible or even probable. *In other words, SAG made no attempt to do this step.*

3. Outputs

SAG provided tangible outputs in the form of reports and presentations. The intangible output was that a systematic Foresight process was executed at the HUN MoD for the first time, and the organization accepted the necessity of strategic Foresight. However, the strategic Foresight process did not change the views and perceptions about futures and strategic options in the HUN MoD. *Therefore, this step was not completed effectively.*

4. Strategy

The Foresight process was one of the inputs for developing a strategy for the HUN MoD. During the strategy making phase, the results of the Foresight process were used. *Accordingly, the strategy phase was executed properly.*

D. DIAGNOSIS

The above analysis highlighted that, although the inputs, analysis and strategy phases were executed properly, the interpretation and prospection phases were missing from the HUN MoD's strategic Foresight process. Of Voros's diagnostic models, the HUN MoD's recent strategic Foresight process thus belongs to the "shallow Foresight" category (Figure 9), since the source of the outputs stemmed only from the results of the analysis phase. According to Voros, shallow Foresight "produces a fairly thin set of outputs based on the clear and obvious present."[130] These outputs usually only reveal trends (which they did) and thus provide a superficial picture about the future, rather than including insights possibly discovered in the interpretation phase and alternative futures discovered during the prospection phase. Therefore, strategic options resulting from the HUN MoD's process remain "suspect."

[130] Voros,"A Generic Foresight," 18.

This diagnosis resonates well with the shortcomings of the HUN MoD's strategic Foresight process. In regard to the Russian intervention in Ukraine and the migration crisis, SAG accurately identified the trends, but the results of the Foresight remained superficial. SAG was aware of the more assertive/aggressive Russian behavior in international politics and the trend of the ever-increasing Russian defense budgets. The HUN MoD's experts also knew about the increasing number of illegal migrants arriving in Europe in general and to Hungary in particular, and it was clear that the causes of mass migration would not disappear in the foreseeable future. From these trends, SAG concluded that Russia would be more aggressive in the future and would be willing to use military force, and they foresaw that migration will cause bigger problems for Hungary. Thus, the output of the SAG strategic Foresight process regarding Russia represented an accurate analysis without specificity as to the timing or location of the Russian military intervention, and, even though the SAG also accurately foresaw increasing mass migration, SAG did not believe that it would actually happen and could not imagine a situation where the HDF would have any role in handling mass migration. Accordingly, the results of the strategic Foresight process were more educated guesses based on trends, or, as Voros puts it, the conclusions remained "rather suspect."[131] Probably, the incorporation of the interpretation and prospection phases into the HUN MoD's strategic Foresight process could have provided a deeper and more thorough analysis of different futures. This could have increased the probability that the HUN MoD may have become more aware of a Russian military intervention in Ukraine and the impacts of mass illegal migration on the HDF.

To fully utilize strategic Foresight, analysts must find a way to include insight. The main tasks of the interpretation phase are going beyond the surface, challenging the current knowledge, and avoiding shortsightedness, a pitfall of the shallow analysis model. According to Richard Nelson, the "antidote" of shortsightedness is the type of insight that he defines as "the ability to see a situation in its full complexity."[132] While Nelson accepts that it is not possible to see anything "in its full complexity" in real life, he finds

[131] Voros,"A Generic Foresight," 19.

[132] Richard Nelson,"Insight May Be the Greatest Power of All," *Army*, April 2016, 34.

it necessary to find and understand the most relevant factors of the studied events and processes.[133] He also points out that Andrew Marshall, the former head of the Pentagon's Office of Net Assessment (ONA), was a master of providing strategic insight.[134] Marshall led ONA for more than four decades. During this time, he created analytical frameworks and provided analyses in order to understand "the fundamental character of competitive situations"; Marshall's analyses "led to sound competitive strategies" that gave relevant advantage to the United States.[135] Marshall also developed the so-called net-assessment framework, an "interdisciplinary, empirically driven, and diagnostic"[136] approach based on his interest and research on "organizational behavior research, research on (business) strategy, and the evolutionary and cultural views of human nature."[137] Although Marshall and ONA were probably not aware of Voros's framework, their most commonly used methods of net assessment (trend analysis, considered judgment, scenarios, and war games)[138] correspond with Voros's three Foresight phase steps:

1. analysis: trend analysis;
2. interpretation: considered judgment;
3. prospection: scenarios and war games.

If SAG had used Andrew Marshall's approach (not necessarily in terms of methodology, but in terms of intellectual foundations), HUN MoD would have had a bigger chance to foresee the Russian intervention in Ukraine. Namely, SAG could have asked certain questions to dig deeper and get insight about Russian intentions. For instance, SAG could have discussed why Russia was increasing its defense budget, for what would Moscow be likely to use their increasing military might, and what system

[133] Ibid.

[134] Ibid., 35.

[135] Ibid.

[136] Mie Augier, "Thinking about War and Peace: Andrew Marshall and the Early Development of the Intellectual Foundations for Net Assessment," *Comparative Strategy* 32, no. 1 (2013): 10, doi:10.1080/01495933.2013.758509.

[137] Ibid., 5.

[138] Paul Bracken, "Net Assessment: A Practical Guide," *Parameters* 36, no. 1 (Spring 2006): 98.

dynamics might underlie the surface of this trend. However, SAG did not ask these questions but was instead satisfied with a more generic assessment.

The prospection phase could also have helped SAG leave its comfort zone and previous mental models by considering alternative futures. For instance, after digging deeper regarding Russian intentions for using military force, SAG could have created scenarios regarding where, when, and why Russia might intervene militarily. Asking the when question in this phase could have at least generated guesses about the timing of a Russian military intervention. The prospection step probably also would have helped to make the SAG believe that a migration crisis would affect Hungary and may have generated the idea that the HDF might need to be involved. SAG could have made different scenarios or visioning exercises based on different numbers of migrants crossing the Hungarian border and "played" out how Hungarian society and government would react to these different scenarios. With the prospection step, the HDF would have had a bigger chance to realize earlier that, after a certain number of migrants, the government would have no choice but to close its borders and involve the HDF in maintaining border security. In many other ways as well, interpretation and prospection would help to open the HUN MoD to not yet considered possibilities and therefore strategic options for potential, and, obviously, in the two illustrated cases, more than probable futures.

Mie Augier points out that Andrew Marshall thought, "if we have an intellectual structure for what we do and how we think on such strategic issues, we will be in a better position to understand (and act on) our competitive strengths and weaknesses."[139] Taking Marshall's approach, the goal of Foresight at the HUN MoD is not to foresee everything perfectly. Nothing guarantees that the inclusion of the interpretation and prospection phases would have definitely meant that the SAG would have foreseen exactly what happened regarding Ukraine and the migration crisis. However, including the interpretation and prospection phases will definitely increase the chances to foresee another event and also will likely lend a depth of specificity and precision to a statement like "Russia will probably use military force in the future." With a less "shallow"

[139] Augier, "Thinking about War and Peace," 2.

Foresight process, the HUN MoD would have been "in a better position to understand" its "competitive strengths and weaknesses"[140] and could have adapted to the changing circumstances faster.

E. CAUSES OF THE HUN MOD'S SHALLOW FORESIGHT PROCESS

The previous section diagnosed the HUN MoD's Foresight process in 2013–2014 as an ultimately "shallow" one, despite the extensive work put in by many people, since it did not include the interpretation and prospection phases of Voros's generic Foresight framework. Also, the previous section showed that the "shallowness" of the Foresight process was probably the main source of the shortcomings. So, why did the HUN MoD's Foresight process become "shallow"? Why was SAG satisfied with the completion of the analysis phase rather than looking for insights (interpretation phase) and alternative futures (prospection phase)?

To address these questions, as a starting point, it is worth studying the Foresight methods the SAG used. The applied methods can provide important information about the HUN MoD organizational culture and thus can give hints as to why the HUN MoD's Foresight process was designed without interpretation or prospection in mind. Rafael Popper categorizes the Foresight methods into four groups based on their type of knowledge source:[141]

- Creativity-based methods are usually a "mixture of original and imaginative thinking" where innovation and inspiration plays an important role;
- Expertise-based methods exploit the knowledge and skills of subject-matter experts;
- Interaction-based methods generate knowledge by bringing together participants with different expertise into an interactive environment;
- Evidence-based methods usually rely on documents, quantitative and statistical information.

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[140] Ibid.

[141] Rafael Popper, "Foresight Methodology," in *The Handbook of Technology Foresight: Concepts and Practice*. ed. Luke Georghiou, Jennifer Cassingena Harper, Michael Keenan, Ian Miles, and Rafael Popper. Edward Elgar, 2009. 44–88. Print. Pime Ser. on Research and Innovation Policy.

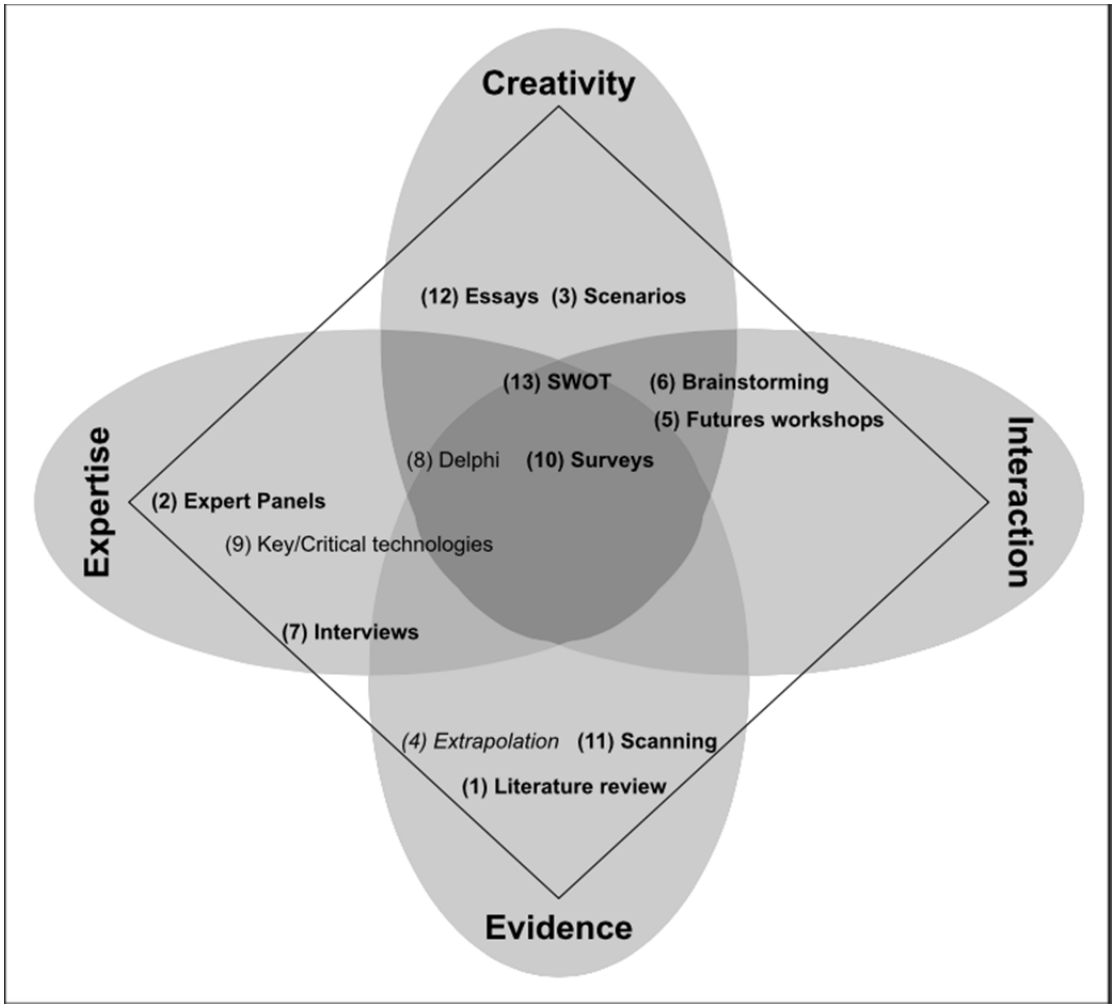

Figure 11. Capabilities of Most Commonly Used Foresight Methods (numbers indicate the popularity of the method where one is the most popular).[142]

Popper also researched which Foresight methods are the most popular. He examined 886 Foresight studies, and, based on his research, projected the 13 most popular methods into a "diamond" that also shows the knowledge base of each method (see Figure 11).[143] Of the 13 methods identified by Popper, the SAG used five: literature review, scanning,[144] extrapolation,[145] interviews,[146] and expert panel.[147] Figure 11 shows

[142] Rafael Popper, "How Are Foresight Methods Selected?" *Foresight* 10, no. 6 (2008): 72.

[143] Ibid.

[144] The PESTEM method.

[145] The SAG used extrapolation and extrapolated data concerning certain demographic, technological, environmental, and military processes and phenomena, as well as others.

that three (literature review, extrapolation, and scanning) of the five methods are purely evidence-based, one (interviews) is on the border between the evidence-based and expert-based methods, and the remaining one (expert panel) is expert-based. In terms of methods, then, the HUN MoD's Foresight process was heavily evidence-based with some expert-based inputs. However, both the creativity-based and interaction-based methods were entirely missing from the process. Usually, these are the methods that provide insight (interpretation phase) and help to study alternative futures (prospection phase). Based then on the research of both Voros and Popper, the HUN MoD did not consider either insights or alternative futures.

Probably, the most surprising phenomenon is that scenarios are missing from the methods SAG used, despite the fact that this method is very popular in the Foresight studies of public administration and defense organizations.[148] Interestingly, the application of scenarios were considered during the early development phase of the HUN MoD's Foresight process, but the idea was rejected with the argument that the HUN MoD did not have the resources for that.[149] The developers of the SAG method (including the author of the thesis) deemed that the experts of SAG would be already overburdened without scenario exercises, as they had to complete their "normal" job besides their participation in SAG. However, there was no real objection against this decision, and, for the participants of SAG, it felt natural to focus solely on the most probable futures rather than on alternative futures. While that reasoning makes sense, it unfortunately meant that the prospection phase went missing.

Gloria Appiah and David Sarpong highlight that organizational routines have significant impact on strategic Foresight.[150] One type of routine they focus on is

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[146] SAG invited subject matter experts to give presentations and discuss certain topics.

[147] SAG was basically an expert panel.

[148] Popper, "How Are Foresight Methods Selected?" 74.

[149] The author of the thesis worked as a senior strategic analyst at the DPD and the SAG that time, and this statement stems from his own observations.

[150] Gloria Appiah and David Sarpong. "On the Influence of Organisational Routines on Strategic Foresight" *Foresight* 17, no. 5 (2015): 512–527, doi:10.1108/fs-11–2014–0067.

"recurrent interaction patterns which are performed by participant of routines."[151] The most important routines at the HUN MoD regarding future thinking are reading intelligence reports and consultation with operational and strategic level military intelligence analysts. Strategic Foresight activities cannot really be called routine at the HUN MoD considering the first systematic and structured Foresight process happened in 2013–2014 as described by this thesis. Also, the possibility that the intelligence mindset and the institutionalized routines related to intelligence activities at the HUN MoD impacted the Foresight process cannot be excluded. Although intelligence and Foresight typically supplement and enrich each other with their different foci, in the case of the HUN MoD, it is a possibility that the Foresight process has become "intelligencized" because of the strongly intelligence-focused routines of the organization.

In general, intelligence looks for "specific, fact-based answers to specific questions," providing information on predictable matters.[152] In addition, information provided by intelligence reports relies on different, reliable, and independent sources, and intelligence analysts are looking for facts and evidence.[153] This also means that they rarely take into consideration alternative futures; rather, they are interested in the probabilities of future events based on current facts. According to the terms of Voros, they are only interested in the "probable" future. Future is not plural in this case, as intelligence analysts' ontological assumption about the future is often singular, thus they perceive the problem of foreseeing future events as an information-gathering problem. Foresight asks broader questions, has a deeper horizon, and also studies less predictable issues. Foresight is less obsessed with sources and evidences, but it attempts to think critically about long-term developments to identify threats and opportunities. Foresight takes interest in alternative futures in order to broaden the organization's perspective regarding future possibilities by challenging assumptions and even "thinking about the unthinkable."[154]

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[151] Ibid., 516.

[152] John Michael Schmidt, "Policy, Planning, Intelligence and Foresight in Government Organizations." *Foresight* 17, no. 5 (2015): 493. doi:10.1108/fs-12–2014–0081.

[153] Ibid., 489–496.

[154] See: Kahn, *Thinking about the Unthinkable.*

The HUN MoD's strategic Foresight process bore many characteristics of intelligence work. It focused on the most probable future outcome, it was not interested in alternative futures, its methodology was mostly evidence-based, it did not challenge assumptions, and it did not broaden the perspective of the organization about futures. The HUN MoD's Foresight work resembles an open-source long-term intelligence report much more than it does a Foresight study. The surprising thing is how naturally both the SAG and the HUN MoD accepted this approach, that they did not feel it problematic at all. However, it is less surprising considering that intelligence-like future thinking resonated very well with the organizational routines of the HUN MoD. Most members of SAG read intelligence reports for their everyday work, and some SAG members were intelligence analysts themselves.[155]

The evidence-based, probabilistic, singular-future-focused intelligence mindset of the HUN MoD may explain why the SAG did not engage in the prospection phase or consider alternative futures. However, it does not necessarily explain why SAG also missed the interpretation phase, or why it did not try to dig deeper and come out with insights concerning certain focus areas, as interpretative analysis is common to intelligence work. The most probable explanation is that the SAG did not have extensive knowledge and experience about how to conduct a Foresight study properly. Despite the fact that the possibility of including scenarios (prospection phase) into the Foresight process was debated during the development of the HUN MoD's method, aspects of the interpretation phase were never discussed. This shows that the SAG and the developers of the Foresight process (including the author of this thesis) were not prepared enough regarding the methodologies of strategic Foresight.

Chapter V has considered reasoning the causes of the shortcomings of the Foresight process at the HUN MoD, and Chapter VI gives final conclusions and recommendations.

[155] The author of the thesis worked as a senior strategic analyst at the DPD and the SAG that time, and this statement stems from his own observations.

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VI. CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

The thesis attempted to answer why the HUN MoD's strategic Foresight process could accurately predict Russian aggressive behavior including the use of military force and also accurately predict the European migration crisis, yet the experts of the HUN MoD did not predict the timing of the events (Russian military intervention in Ukraine) and did not believe that their conclusions would come true (European migration crisis). To address the core question of these shortcomings, this thesis introduced the evolution and main concepts of Futures Studies including Foresight, described the Hungarian strategic Foresight process and its results, explained how the Hungarian experts of SAG were thinking about Russian aggressive behavior and the migration crisis before the events started, and compared that thinking to the actual events.

Finally, the thesis analyzed the HUN MoD's strategic Foresight process with the help of Voros's generic Foresight framework and confirmed those findings with Popper's categories of Foresight methodology methods. Based on this analysis, the thesis has come to the following three conclusions:

1. The HUN MoD's strategic Foresight process had a relevant methodological flaw. In Voros's methodological terms, HUN MoD's process missed the interpretation and prospection phases and became a so-called "shallow" Foresight, because, after the analysis of the collected information (analysis phase), it provided the outputs without developing insights (interpretation phase) and studying alternative futures (prospection phase).

2. The reason why the interpretation phase, where insights should have been developed, was missing was that the developers of the Foresight process were not prepared appropriately concerning Foresight methodologies.

3. The reason why the prospection phase, where alternative futures should have been studied, was missing stemmed from the HUN MoD's intelligence-focused mindset. Intelligence work does not deal with alternative futures; rather, it focuses on probabilities based on a single

future. As the most relevant routines regarding future thinking of the HUN MoD relate to intelligence work, no one felt it problematic that only the most probable future was studied while no alternative futures were considered by SAG.

B. RECOMMENDATIONS

The recommendations below aim to improve the HUN MoD's future Foresight processes by addressing the three conclusions mentioned above.[156]

Improve the methodology of Foresight:

The current HUN MoD Foresight process has to be improved by adding the currently missing interpretation and prospection phases. As several Foresight frameworks and dozens of Foresight methods exist, the development of the Foresight process needs relevant research and extensive experimenting. The HUN MoD should sponsor research projects concerning methodological issues and should experiment and test itself to figure out which frameworks and methods are most appropriate for its organizational capabilities and dynamics. It is important to note that the improvement of the strategic Foresight process should build on the already achieved successes and existing methodology of the SAG so as to benefit from the previous development of the Foresight process rather than starting from scratch and also so that the expertise acquired during the first SAG stays relevant.

Build Foresight capacity:

To better understand Foresight methods, the HUN MoD should educate their experts in this regard. This may happen by inviting Foresight experts to give lectures and workshops, and certain experts of the HUN MoD could be sent for short and long term courses or field trips to institutions that have relevant knowledge and expertise regarding Foresight.

The HUN MoD should also launch a strategic Foresight internships initiative for graduate students whose thesis research is related to Foresight or those who have

[156] The recommendations take into consideration and are based on the intellectual foundations of Andrew Marshall's net assessment framework (organizational behavior and limited rationality; extending the understanding of organizations to strategy; and evolutionary and cultural perspectives on human nature). See: Augier, "Thinking about War and Peace," 5–10.

experience on Foresight work. These interns could not only alleviate some burden of the SAG during the execution of the Foresight process (completing extensive literature reviews, for example), but the most talented ones could also be hired after the end of their internship, bringing relevant knowledge on Foresight into the HUN MoD.

Raise awareness on the differences between intelligence work and Foresight work:

To begin to change the intelligence focused mind-set that exist at the HUN MoD, the SAG should organize Foresight workshops that demonstrate the usefulness of Foresight and its differences from intelligence work for HUN MoD intelligence and policy analysts. SAG also may organize a yearly conference on possible areas of cooperation between Foresight and intelligence in Hungary. The SAG should invite not only experts from the HUN MoD but also people from civilian organizations (companies and universities, for example) so that Foresight projects and open-source intelligence works can serve as the basis for exchanging experience and knowledge.

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