

**NATIONAL UNIVERSITY OF PUBLIC SERVICE (HUNGARY)**  
**Doctoral School of Military Sciences**

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**Operative psychological methods in the fight against the extremist  
groups and terrorism**

PhD thesis (booklet)

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Budapest, 2019.

## Summary of the research problem

In this thesis, I did content analysis of the online activity of extremist groups, individuals and terrorist organizations. The spread of international terrorism and extremist ideology in the European region, as well as the online behavior of these groups are a prior security risk. This topic is actual, because the modern security challenges cannot be handled by traditional methods.

Hungary is currently a safe state in terms of terrorist threats, but hatred groups and individual offenders can impose a serious threat to the society. The public can feel sympathy for these groups, thereby approving their activities.<sup>1</sup> These organizations can be strengthened during an economic or social crisis and recruit additional members. In addition, the threat indicated by international terrorism cannot be ignored, because the attacks or other violent acts of the international groups are motivated by the current situation and possibility, so these can be occurring at any time.<sup>2</sup>

The national security services should fight against radicalism and violent activities with democratic and legal tools.<sup>3</sup> In Hungary, the National Security Strategy defines the security risks and threats, which have to be monitored by the security services.<sup>4</sup> Each body of the national security have different task structures, but the common element is to maximize the capabilities of intelligence assessment and counterintelligence, to increase the effectiveness of prevention and to evaluate the national and international security issues.<sup>5</sup>

The national security professionals use interdisciplinary results to explore the motivation and the operating mechanism of radical groups and to continuously monitor their activities. The national security services can benefit from alternative psychological methods of data mining and data analysis to support this work. In the thesis, I present how psychological methods can help in the intelligence services related to extremism. I emphasize the threat of the radical groups being present on the internet, and I present the tools that can be used to analyze the online contents.

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<sup>1</sup> Szternák GY. (2012): Szélsőséges cselekmények veszélyei, Tanulmányok „A BIZTONSÁG RENDÉSZETTUDOMÁNYI DIMENZIÓI – VÁLTOZÁSOK ÉS HATÁSOK” című tudományos konferenciáról, 2012.

<sup>2</sup> Bolgár J., Szternák GY. (2003): A terrorizmus társadalmi és személyiség-lélektani háttere, Előadás a Zrínyi Miklós Nemzetvédelmi Egyetemen, 2003. november 18.

<sup>3</sup> Szternák, 2012.

<sup>4</sup> A Kormány 1035/2012. (II. 21.) Korm. határozata Magyarország Nemzeti Biztonsági Stratégiájáról

<sup>5</sup> Id. Dobák I. (szerk.): A nemzetbiztonság általános elmélete, Nemzeti Köszolgálati Egyetem, Nemzetbiztonsági Intézet, Budapest, 2014.

The content analysis methodology has been widely used in social sciences. Content analysis can examine big data which challenges the conservative methods. The process combines quantitative and qualitative elements enabling the analysis of the texts, visual or auditory contents. In the field of national security, more and more studies are concerned with the internet contents and social media sites. In 2017, NATO organized a conference on the online activity of terrorist groups, and the conference proceedings emphasize that the social media, the cyberspace provide new opportunities for information sharing and expansion for these groups.<sup>6</sup>

It is important to emphasize that besides the classic textual content analysis, it is possible to study the internet and the social media platforms with other content analysis methods. The followings can be studied by content analysis (topics, keyword analysis, linguistic and semantic analysis, analysis of communication):

- trend analysis monitors changes in content
- network analysis focuses on relationships, attachments, and frequency of interactions,
- emotional analysis examines verbally and graphically presented emotions
- the goal of geo-analysis is to find the location of events,
- the behavioral analysis specifically monitors the online activity.<sup>7</sup>

### **The goals and the hypotheses of the research**

The goal of my thesis was to identifying the suitable method – based on the relevant literature and my own results – which can define the characteristics of extremist groups and individuals. My thesis shows that the psychological approaches can provide useful tools to the national security sector. The main goal of my study was to present how the approaches of psychology, including that of the content analysis, can be advantageous for the intelligence and special security tasks. In the empirical research I used quantitative and qualitative methods to demonstrate that – next to the mental health care and organizational psychology – the analytical psychology can also become an integral method of the defense sector.

I have determined the factors which can serve to identify extremist contents and I examined other variables based on national and international results of research.

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<sup>6</sup> Social Media in Operations – a Counter-Terrorism Perspective for NATO StratCom COE. COE-DAT, Ankara, Törökország, 2017. szeptember 27-28.

<sup>7</sup> Nissen, T. E. (2015): The weaponization of social media. Characteristics of Contemporary Conflicts. Royal Danish Defence College, Koppenhága, 2015.

*1. Based on the international and domestic literature I would like to justify that some types of content analysis are suitable for identifying radical content.*

I assume that with the help of content analysis, it is possible to identify the psychological characteristics of the extremist groups. I want to prove that extremist groups can be recognized by identifying relevant psychological concepts such as stereotype, discrimination and aggression in their online texts.

*2. The hypothesis is that the LIWC content analysis software is suitable for analyzing the written material of Muslim terrorist groups. With the software, the radical contents can be filtered out, allowing the authorities to monitor them continuously.*

I assume that online magazines run by the Islamic State and al-Qaeda will use plural pronouns extensively and have high number of words about social processes and group cohesion. In addition, I would also like to show that the proportion of emotionally strong words will be significant, as well as the number of expressions related to achievements and power, netjargon will be highly used and future oriented style will be observed. I assume that the cognitive complexity of the texts of terrorist groups predicts the probability of terrorist attacks.

*3. Hypothesis is that LIWC is also suitable for analyzing the rhetoric of radical right-wing groups, and for identifying extremist psychological features.*

Accordingly, I assume that the number of plural pronouns will be high, as well as the number of expressions for social processes, negative emotions, the number of words referring to power and achievement. I want to prove that extremist right-wing texts are characterized by causation, certainty, and discrimination.

*4. Hypothesis is that psychological characteristics of extremism appears in the texts of both extremist right-wing organizations and Islamic terrorist groups, but differences will be observed.*

*5. Hypothesis is that Anders Breivik's manifesto will show most of the psychological elements of extremism.*

*6. The empirical research shows that qualitative content analysis is also suitable for analyzing extremist group texts.*

In this context, I emphasize that the Hungarian right-wing groups can be identified by strong group cohesion, hostility towards any external groups and the respect for traditions. I expect that the words of aggression will be high in the rhetoric of extremist groups regardless of its nature and content.

*7. I assume that quantitative and qualitative content analysis can be applied in different cases because the quantitative methods are suitable for determining objective characteristics, whereas the qualitative tools are providing a subjective and comprehensive analysis.*

### **The structure of the thesis**

The work consists of two major parts: the summary and results of the national and international research is presented in the first part, in the second part I demonstrate the method of content analysis through an empirical study.

First, I summarize the relevant national and international studies and documents about psychological work of the security sector. The relevant documents of the different organizations' and institutions' accessible databases were an important source of the thesis. In several chapters I presented the psychological, socio-economic and political circumstances of radicalization and the tasks of the security sector associated with extremist groups and persons. In the thesis, one chapter deals with the possibilities of the psychologist work and the psychological aspects of content analysis in intelligence. I introduced the historical background and methodology of content analysis and its usability in law enforcement and national security.

In the second part of my thesis I presented my own research results, an empirical study containing the followings:

- First, I analyzed extremist websites and published contents in English with a content analysis software.

- Using this quantitative program, I identified the characteristics of potential lone offenders.

- With the help of manual (qualitative) content analysis technique, I outlined the characteristics of the activities of extremist organizations currently operating in Hungary and their online activities. I determined whether there are specific characteristics of the domestic extremist groups based on international studies and my own results.

- Based on empirical research, I concluded the differences between manual and software content analysis and defined the advantages and disadvantages of the two methods. I identified the effectiveness of different types of content analysis in intelligence and analysis work.

- Based on the results, I initiated to develop a general, domestic system, which would help to identify and continuously monitor the potentially dangerous extremist groups in Hungary.

### **Methodology of the research**

The independent empirical study consists two main parts. In the first step, I conducted a quantitative content analysis with a software on English-language extremist websites with the aim of presenting the method's applicability in the security sector. In the second phase of the research, I identified with a manual, qualitative method the variables, which could be the basis of an objective, quantitative Hungarian tool.

Quantitative content analysis is also suitable for analyzing large text, however, it only analyzes the words depending on predefined categories. On the other hand, the qualitative method is time-consuming, therefore, it is applicable for shorter texts, but it can provide a more detailed analysis. First I used the LIWC (Linguistic Inquiry and Word Count) software developed by Pennebaker et. al, and then I used the manual method developed by Mayring et. al. At the end of my thesis, I summarized the experiences of the research based on the results of the two methods.

### **Summary of Chapter 1**

In the first chapter, I analyzed the political and social manifestations of extremist ideologies and the psychological and motivational background of radical persons and groups. First I clarified the definition and psychological characteristics of a group. The individual's

need for interpersonal relationships supports the identification with a group. The common social ideology determines that the individual values will be identical to the group norms, whereas the existence of the group contributes to the need of individual control. The membership of a group becomes a priority in a person's life when an external agent threatens the whole group. The internal frustration caused by the threat strengthens the group cohesion and, in extreme cases, makes the group receptive to radical ideologies.

Implied from the above, the existence of an extremist group requires a common enemy. Prejudices, stereotypes and discrimination are psychological concepts which are essential to understand the functioning of extremist groups. The emotional and behavioral response of an individual will be hostile to an external group, if the individual evaluates its members as dangerous.

In this chapter, those social processes are presented which are beneficial to the development of extremist groups. Models of social movements suggest that one of the main reasons for emerging radical ideologies is the persistent existence of an unresolved grievance or conflict. Furthermore, extremist groups easier become violent in failed and weak states. The extremist organizations can effectively address the problems of those on the margins of society. Many of the immigrants join radical ideologies or religious fundamentalist groups, while some members of the majority can sympathize with extremist right-wing movements which reject Islamic migration and multiculturalism.

Based on national and international studies or TE-SAT reports<sup>8</sup>, the spread of Islamic fundamentalism and extreme right-wing ideas are the greatest security risk in Europe, apart from these, the extreme left-wing groups could gain relevant support. In the context of terrorism, nowadays the focus is on the Islamic State and its invasion in the Middle East, furthermore its attacks in Europe. There are few effective measures to counteract these attacks. The terror organizations of the 21th century can expand globally with the help of the internet, they can mobilize their followers anywhere in the world.

In addition to extremist groups, there are individuals, who commit terrorist attacks without a support of an organization, but often in the name of a radical ideology. These people are often not or only loosely tied to terrorist groups and, therefore, are often not known by the authorities before the planned assassination. In recent years, several lone wolves have

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<sup>8</sup> TE-SAT, Terrorism Situation and Trend Report, European Police Office, 2007-2014. See here: [https://www.europol.europa.eu/latest\\_publications/37](https://www.europol.europa.eu/latest_publications/37)

published extremist thoughts and contents on the internet prior to the planned attack (see e.g. Anders Breivik, Ábel Somogyi).

## **Summary of the Chapter 2**

The second chapter describes the intelligence services. In Hungary, the National Security Strategy defines the areas to be addressed by intelligence organizations. The proliferation of weapons for mass destruction, organized crime, the security risk of industrial disasters, international terrorism, illegal immigration and the radical groups are potential thread at national, regional and global levels. Collecting and analyzing information on these issues are the task of different intelligence bodies and it contributes to the governmental security decision making.

Chapter 2 presents the intelligence activities to collect raw information, which will be evaluated during the systematization and information processing. Intelligence and analytical work on extremist groups and terrorist organizations, which are the main research areas of the thesis, is the task of the counter-terrorism. In Hungary, the Counter-Terrorism Center is the main body to counteract the terrorist threat, however, the national security organizations also support the fight against terrorist groups, radicalization and organized crime. At the international level, the counter-terrorism includes the intelligence, the decision-making on juristic and political actions, furthermore, the strategic planning of military actions.

Due to the global threat of terrorism, several international organizations have developed a counter-terrorism strategy; these conventions place great emphasis on coordination, information sharing, prevention and rapid responses. The EU's counter-terrorism actions include passenger records, effective counter-propaganda, monitoring of extreme online contents and preventing the financial support of terrorism. The lonely wolves, the infiltration of foreign agents and the use of online interfaces for terrorist aims require an emphasized attention from the EU to enable a fast and efficient counterattack. An important element of the US counter-terrorism strategy was to support weak states in the past, in the recent years, the strategy focuses on strengthening the national defense.

In the 21st century, the counter-terrorism and the national security agencies pay special attention to the detection and monitoring of the extremist content on the Internet. The recruitment for radical movements, the connection on the Internet between terrorist bodies and the development of the telecommunication system have all contributed to the increased security threat caused by terrorism. The national security and military bodies are developing



their activities against radical movements on a predefined strategy, and according to the findings in Chapter 2, the investigation of online contents and the identification of extremist elements are an import part of this strategy.

### **Summary of Chapter 3**

The chapter presents the methodology of the content analysis in the national security. Special attention is given to the description of the profiling procedures, as the psychological profiling, next to the statistical and criminological profiling, gains an increased importance in the security services.

In addition to profiling, psychological analysis also contributes to the understanding of the potentially important contents in the counterterrorism. The use of the psychological content analysis efficiently supports the intelligence work, the analytical and information-linking processes and the identification of relevant data, including of threats and extreme content on the Internet.

The content analysis is an interdisciplinary process that allows to examine specific texts, images and other communications. Content analysis includes both quantitative and qualitative elements, usually with two major steps. First step is the coding of the document, when the words and symbols are defined into specified categories, the second phase is the interpretation. Content analysis is thus suitable for identifying hidden structures in a text. Nowadays in Hungary, the content analysis has expanded mainly in the narrative of the psychological field.

Content analysis has several techniques, depending on the subject of the study (e.g. interaction analysis, analysis of literary texts, videos, images, etc.) and the purpose of the study (psychological characterization of the author, outlining of communication trends, identifying the authors, etc.). Quantitative software techniques are used to analyze large text, to organize words and phrases into predefined categories. Quantitative content analysis allows for objective analysis of the text, while qualitative content analysis is more subjective. In qualitative content analysis, the categories are not predetermined, but identified by the researcher during the analysis, which allows for specialization for the individual text. Using this method, we can get a more detailed understanding of the content than with quantitative tools.

Analysis of online content is gaining importance in law enforcement and national security agencies, as it helps to identify the psychodynamic characteristics of extremist groups

based on their online activity. These methods are suitable for analyzing the interactions between members and leaders, as well as for analyzing lonely perpetrators. The authorities also use content analysis techniques to examine various threats, anonymous tips or radical texts and videos. The large number of threatening messages are also sent to the security bodies, the validity of these has to be clarified. In order to prevent the potential attacks, the generated information should be filtered and evaluated to enable early intervention. Modern psychological methods – especially the content analysis– provide tools to identify the hidden structures to detect the motivation for real attacks and to evaluate the risk of threats.

## **Summary of Chapter 4**

Chapter 4 describes the empirical research, which presents the possibilities of using content analysis. The study consists of two major parts: in the first section, quantitative content analysis was done with the help of the LIWC software on English extremist forums and online newspapers. In the second section, I analyzed the websites of the Hungarian far-right groups by using a qualitative, manual content analysis method.

The LIWC content analysis software quantifies the psychologically relevant words in the text. After assigning automatically the words to one category, the program determines the incidence rate of those words. The selection of the samples was based on the findings of Chapter 1 and convenience sampling. I examined the Islamic extremist fundamentalism on online magazines (Inspire, Dabiq) issued by Al-Qaeda and the Islamic State, while the far-right radicalization was studied on the largest American far-right forum, the Stormfront. In connection with lone wolves, I analyzed Anders Breivik's 1500-pages proclamation to see what specific psychological and grammatical features can be identified in this type of documents. The control group of extremist samples was provided by online contents that are similar to the target groups in terms of their ideological background.

I performed the statistical calculations with the SPSS software, to identify the percentages of the relevant variables in the texts, furthermore, I performed correlation studies to see which variables appear significantly more in the extreme contents. I also analyzed the differences between Islamic radical and extreme right samples. The results support the original hypotheses.:

In the case of Dabiq and Inspire, the low value of the emotional tone means hostility, furthermore, the high number of expressions of analytical thinking and domination present objectivity and aims to have high impact. These media are characterized by influential power,

self-confidence and a kind of “professional” knowledge. The attempt of strong control can also be detected mainly in Dabiq, and there are signs of prejudice against external groups (third-person plural form). The high number of words referring to social processes is linked to internal group cohesion, furthermore, masculinity and netjargon are also common in these newspapers. Frequent use of future focus by Al-Qaeda may indicate optimism. Both websites contain a relative low number of power-related terms, which contradicts the hypotheses. In the study, I analyzed the differences in cognitive complexity, because some studies suggest that its decrease correlates to the planning of terror attacks. In Dabiq, the cognitive complexity is the lowest in the Issue 11 (September 9, 2015), and the Islamic State shortly afterwards committed the attack in Paris (November 13, 2015).

In the case of Stormfront, the authenticity scale shows high level, which refers to subjectivity and personal tone. In the examined texts, informal words are highly present, and the grammatical complexity of the texts is low. The high number of second-person plural expressions can also mean negative attitudes towards external groups. The difference between the rhetoric of the Islamic terrorist magazines and of the far-right forums were clearly observed, which can be caused by the difference types of contents.

Based on analysis of Breivik’s proclamation, it can be concluded that the text contains many elements indicating extremism ideology.

In the second part of my research, I examined the websites of the far-right Hungarian groups with a qualitative, manual method. The primary aspect of sample-selecting was the availability of open source data. In the content analysis, I created unified, grammatically shortened paraphrases. I determined which paraphrases belong to one category, and thereafter I created a shortened text. In the second step, I made an analysis of the summarizing texts by determining which radical elements appear in large numbers in the text. The results were similar for the different far-right groups. On the whole, the websites are well-edited with complex content, and aspects of extremism is present (e.g. military art work, violent content). In addition to the clear appearance of radical views, we can see militaristic character, furthermore, signs of the Hungarian superiority, traditional values and an existence of the persistent threat from an external group. In all texts, specific external grievance is present which strengthens the group cohesion. Moreover, the texts indicate a low level of education.

## **Conclusions**

In the first part of the thesis, I introduced the extremist and terrorist groups, which are presenting threat to the Western countries, and the national security tasks, which can be effective in the counterattack and defense. I identified the psychological variables indicating extremism, and the characteristics suitable to filter the radical contents. According to several social movements' models, the first step in radicalization is the proliferation of the group's grievances, which becomes dangerous if the society and political leadership fails to react effectively. Consequently, extremism cannot be examined separately from the social, political and economic circumstances in the given country. Today in Europe, Muslim immigration, the lack of integration of the minorities, the Islamic fundamentalism as well as the anti-immigration contribute to serious frustration and in some cases, to extreme behavior. The widespread extreme ideology supports many lonely wolves, who usually act under the influence of some radical ideology and are often radicalized on the Internet.

Various national and international authorities put great emphasis on finding radical organizations and individuals and monitoring their activities. The authorities and the great powers have incorporated active anti-terrorist actions into their security strategy reflecting to the changes in the 21<sup>st</sup> century security environment. The European Union's strategy from 2014 emphasizes the lone offenders, the online recruitment by terrorist groups and radicalization, including the role of social media.

The preventive actions on terrorism and the identification of radicalization are no longer possible without the knowledge of psychological factors. The content analysis can identify the manifest content in the texts and the author's profile. Both the international and national literature suggest that the method is suitable for the examination of online texts and contents, and it can also be used in situations without personal contact. National security services are increasingly using content analysis software and methods to detect and to investigate online radical contents.

In the second part of my thesis I carried out an empirical research using quantitative and qualitative content analysis methods. The activities and influence of the examined groups and individuals correlates with the development of the Internet, as they can easier communicate their ideology on the online platforms. The Internet also provides opportunities to connect, communicate and organize events or actions. At the same time, radical persons have been available to the authorities without the need for HUMINT or SIGINT methods to monitor

Internet contents. Open source data is easy to access, but for processing a large amount of unstructured information, appropriate tools are necessary.

My study shows that both IS and Al-Qaeda are professionally engaged in online recruitment and training. Newspapers are well-structured, characterized by high grammatical complexity and these contents can effectively address their followers. In these online magazines, which aim at objective communication and presentation of terrorist methods, the constant external threat and prejudice is clearly detected (e.g. extensive use of the third-person plural forms and pronouns). The internal group identity is strongly present (words for social processes), the netjargon and the emphasize on future tense indicates a recruitment purpose. The hypothesis, that the decrease of the cognitive complexity in the content can predict the attacks, was supported in the case of Dabiq, however, the nature of this magazine is not suitable for this type of analysis. Furthermore, it is suggested to analyze the shorter messages and more frequent contents (videos, images) on social media platforms.

Stormfront users, however, communicate subjectively, their posts and texts are more personal and have a high emotional tone. In contrast to the low grammatical complexity, there is a high proportion of words indicating cognitive processes, which can be explained by two factors: grammatical simplicity may be associated with low education and informal communication, whereas the cognitive processes refer to ideological beliefs. The low number of expressions indicating social processes is related to the nature of a forum: these persons are not active members of radical groups, rather, they are potential lonely offenders.

The third part of the quantitative content analysis was the examination of Anders Breivik's proclamation, which is relevant because he committed a terrorist attack. The document accordingly contains all the grammatical and psychological elements that refer to extremism: emotional tone is expressing hostility and anxiety, high number of words are related to anger and death. This proclamation expresses closed-mindedness, possible fanaticism and negative attitudes towards an external group. In the text, the modules are clearly present, which filter out the destructive contents.

The study shows that the rhetoric of extremist and terrorist organizations can indicate radical ideology. In addition, in the free-access magazines and forums, authors carefully choose their communication, and as they are addressing like-minded readers, the content contains less threatening or aggressive elements. Importantly the research shows how these organizations and individuals rely on the Internet.

In the second part of my study, I examined whether a qualitative content analysis method is suitable to provide a detailed profile from the author of the given texts. On the

Hungarian websites, chosen for the analysis, the organizations reflect on the current social problems, which helps them to win sympathizers. Their activity has strengthened as a result of the economic crisis, and since then, the far-right has been quite prominent in the political life of Hungary. These groups are expressing aggression mainly in their ideology and communication, however, violent activities are also related to them (see military training or to murder a policeman in Bőny).

This study supports the image of the Hungarian far-right groups: in the examined documents there are high number of words related to internal group cohesion, traditionalism, nationalism, superiority of Hungarians, external threats and grievances. The latter may be connected to racism and antisemitism, because the external threats include the discrimination against external groups. The analyzed texts focus primarily on recruitment by highlighting the benefits of belonging to the group. The phrases referring to the traditionalism, the attractive characteristics associated with membership (like holy oaths) are all about raising awareness. These movements believe in an external threat to the Hungarian people, which defines their fight as legitimate. However, in the open communication, their fight and violence is expressed only on political and verbal level. The results suggest that the far-right groups in Hungary are unlikely to commit aggressive attacks, but it cannot be ruled out that, motivated by the radicalism, some members would commit violent crimes.

Qualitative content analysis extends the possibilities of the quantitative method, as it can be used to reveal hidden contents of shorter texts by customizing the method. The LIWC program allows to reduce the large amount of information available on the Internet and to organize this information to a structured database. With the help of the software, modules can be identified with psychological meanings related to extremist ideology. In contrast, the qualitative method is time-consuming as each sentence of the text is individually analyzed. The results with qualitative methods are always subjective, which depend on the preliminary knowledge of the person analyzing the text.

### **New scientific results**

1. With the help of empirical research results, I presented a content analysis method that is suitable for identifying the online activities of extremist groups and individuals.

2. I found that with the help of LIWC modules, the investigated Islamic organizations are applying objective and high-level methods in their online communication to effectively

address their sympathizers all around the world. In contrast, in the far-right contents, there were more evidence of subjectivity.

3. In the analysis of Anders Breivik's proclamation, I first showed that the LIWC software discovers the psychological characteristics related to a lone offender. The grammatical and psychological elements of the text are clearly referring to violence and radical thinking. The results can serve as a basis for analyzing the contents of potential lone wolves in the future.

4. Based on the qualitative content analysis, I have proved the usefulness of the method in the online communication of extremist groups. In my study, I have revealed the manifest contents of the documents with qualitative content analysis – which refers to strong group cohesion, common enemy and verbal aggression. Nationalism and traditionalism are also prominent in the rhetoric of the Hungarian far-right groups.

### **Recommendations based on the results**

Based on the results, I suggest that quantitative content analysis is used for preventive screening of large content and the qualitative methods is used for continuous monitoring. The results show that the LIWC software can identify extreme contents, on the basis of which a database of the online platforms can be created, which are of interest of the national security services. The LIWC can be used currently only in English, therefore, it would be necessary to develop Hungarian dictionaries in the future. This work requires a multidisciplinary team of experts (linguistics, informatics) and financial support. My own results point out that in addition to the LIWC modules related to extremism, it is beneficial to develop dictionaries that specifically include words containing radical thinking (see stereotype or aggression).

I analyzed open-access content during my study, as often no other source is available to conduct the analysis in the real national security situation. The control sample, used in quantitative research, may not be available for national security tasks, although it is beneficial to build a database of patterns identifying extremism and radicalism. Using predefined control samples, the relevant contents can be automatically detected, providing an efficient and significant contribution to the intelligence work.

Based on the study, I suggest examining other platforms of Islamic terrorism, in the form of videos, short texts or pictures. These are collected by the nonprofit organization called SITE Group, contacting them and subscribing to their website would be important to

reach terrorist contents. For Stormfront and other similar forums, the next step would be to explore all users and analyze their texts with quantitative methods.

It can be stated that quantitative content analysis plays an important role in intelligence services, while the qualitative methods are suitable for threat evaluation and identification. Manual analysis of the filtered and structured extreme contents provides an opportunity to identify potential risk from the Internet, to evaluate the risk, and to continuously monitor the relevant content. The combined use of both tools support the work of the national security services.

### **Publications**

SZIJÁRTÓ L. (2017): Magányos elkövetők az interneten – Az internetes tartalmak pszichológiai szempontú elemzése. *KNBSZ Szakmai Szemle XV. 4. 100-112. old.*

SZIJÁRTÓ L. (2016): Szélsőséges csoportok internetes tevékenységének tartalomelemzése. *Hadtudomány és a 21. század. Tanulmánykötet, 2016.*

SCHILD M., SZIJÁRTÓ L. (2016): Emotional and cognitive influence in extraordinary situations: Psychological study of responses with content analysis methods. *Academic and Applied Research in Military and Public Management Science 15(3) 249-261. old.*

SZIJÁRTÓ L. (2016): Az internetes tartalmak elemzése alkalmazott pszichológiai módszerekkel. *Hadtudományi Szemle IX. 3. 199-207. old.*

SZIJÁRTÓ L. (2016): A normaszegő magatartás megjelenése szegregált lakótelepeken. *Magyar Rendészet XVI. 4. 29-40. old.*

SZIJÁRTÓ L. (2016): Prosocial attitudes of the juvenile delinquencies. *Magyar Rendészet XVI. 5. 67-78. old.*

SZIJÁRTÓ L. (2015): Az internethasználat biztonságtechnikai kérdései: A virtuális lét rejtett veszélyforrásai *Nemzetbiztonsági Szemle IV. I. 45-57. old.*

SZIJÁRTÓ L. (2015): Az európai szélsőséges szervezeteket érintő hírszerző tevékenység: A radikális csoportok jellemzői térségünkben. *Nemzetbiztonsági Szemle III. II. 4-20. old.*

SZIJÁRTÓ L. (2014): A pszichológiai szempontú tartalomelemzés használatának lehetőségei a védelmi szférában. *Műszaki Katonai Közlöny XXIV. 1. 242-258. old.*

SZIJÁRTÓ L. (2014): Különbségek az egyének és a csoportok között végzett profilozás területén. *(T)error & Elhárítás 2014. 2. 2-20. old.*



## **Professional CV**

01/05/2018 -	National security analyst Terrorelhárítási Információs és Bűnügyi Elemző Központ
01/09/2012 – 30/04/2018	Psychologist Counter Terrorism Centre
01/03/2012 – 31/05/2012	Research assistant UNICEF Hungary, Child-centered Justice (empirical research)
01/11/2011 – 31/05/2012	Journalist Család, Gyermek, Ifjúság magazine for childprotection
01/02/2011 – 15/05/2011	Internship Correctional Institution for juvenile delinquencies, Tököl
01/09/2010 – 15/12/2010	Internship Vadaskert – Children's Hospital for Psychiatry

## **Studies**

01/09/2013 – 31/08/2016	Absolutorium Nemzeti Közzszolgálati Egyetem Hadtudományi Doktori Iskola
01/09/2009 – 01/02/2012	Psychology (MA) Eötvös Loránd University, Faculty of Education an Psychology
01/09/2006 – 30/06/2009	Behavior analyst (Psychology BA) Eötvös Loránd University, Faculty of Education an Psychology

## **Researches**

01/08/2016 -	Operative psychological methods in the fight against the extremist groups and terrorism PhD thesis Consultant: Dr. Bolgár Judit
01/09/2014 -	The use of the operative psychology in the work of state security services between 1945 and 1990 The leader of the research: Dr. Bolgár Judit
01/10/2010 – 30/11/2011	Juvenile delinquencies nursing in a family or in a foster home – characteristics of their prosocial behavior Consultant: Dr. V. Komlósi Annamária