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CONDITIONS OF PUBLICATIONS

VILMOS FISCHL

ISLAMIC CIVILIZATION AND ITS INFLUENCE ON THE WORLD TODAY

Abstract

The author is a Lutheran pastor with a Master Degree in International Relations. He is a Doctor of Military Science (PhD) and a senior staff member at the National University of Public Service, holding at the same time the position of General Secretary of the Ecumenical Council of Churches in Hungary. The title of his publication is “Islamic civilization and its influence on the world today”. The publication is an in-depth study on the fundamental ideas of Islam and on the relationship between these ideas and the western civilization. The author’s focus – exploration of the main characteristics of Islam, along with a scrutiny of the difference between the Islamic civilization and the West – is accompanied by the study on Islamic fundamentalism, as a major challenge in our world today.

Keywords: Islam, violence, fundamentalism, different religions, clash of civilizations, terrorism, extremism

Introduction

Although the 21st century is an era in which our modern world is built on a global economy, and in which the notions ‘social justice’ and ‘social security’ are widely embraced, the question might, perhaps, be asked whether it is impartiality that forms our judgement of various civilizations. Many people are guided by stereotypical preconceptions; they tend to associate the words ‘Arab’ or ‘Islam’ with terrorism. Why is it that topics that contain reference to Arabs or the Islamic civilization immediately bring to mind terrorism? Why is it that the mention of Christianity in an Islamic community will cause people to associate us with loose morals and unethical behaviour? Is our discourse about Islam and the Western civilization an indication of the fact that those civilizations are setting themselves on a collision course, or are the underlying motives entirely different? These are the issues which I have tried to investigate in my lecture, focusing my exploratory efforts on the key elements of both the Islamic civilization and on the difference between Islam and the West. We keep hearing about existing problems between Islam and the West. My objective here is to provide a comprehensive overview of Islam and the West, both from a historical perspective and in the context of both the relationships and the conflicts between those civilizations today. One issue I intend to tackle is Islamic fundamentalism, one of the world’s toughest challenges today.

The question I am trying to answer is why and how the West and America became hated enemies in the radical Islam world, to what extent does this have a religious complexion, and to what extent should this be thought of as the manifestation

of missionary efforts – in other words, to what extent should it be regarded as irrational? Consequently, what are the chances for this hostility to be stopped by methods used in the West?

Violence and Islam

The foundations of a religious belief are part of Islam, where experience requires familiarity with a reality of its own. Just like Christianity, Islam needs objectives, and these objectives have to be achieved by legitimate means.

Although aggression is a non-Islam phenomenon by definition, we cannot turn a blind eye to the fact that the majority of terrorist attacks we have seen in recent years – including some of the most violent acts of terror – were committed in the name of Islam [1]. This triggered a controversy with far-reaching implications, both in the West and in the Muslim world, with the aim of exploring the relationship between these acts of terror and the teachings of Islam. The fundamental question pertains to the existence of a relationship – if any – between these terrorist attacks and the teachings of one of the main religions of the world. I firmly believe that there is no relationship whatsoever between Islam and terrorism, because Islam is a fundamentally peaceful, tolerant religion.

The reasons which explain the relationship between terrorism and Islam are of a political (the Israeli-Arab conflict), cultural (a revolt against western culture) and social nature (estrangement, poverty). While no public figure in the West denies the need to fight terrorism, many also add that a precondition for winning the war on terror is to eliminate the root causes. Many are of the view that despite the fact that most societies have difficulties similar to those encountered in Islam countries, these societies do not breed religion-based terrorism.

There can be no doubt about the political intentions of the leaders of the Islamic Jihad movement. Most terrorist incidents occur in countries where various movements confront the West, be it a political or military confrontation. This is what happened in Sudan and in India during the 19th century and in Egypt and Palestine during the 20th century. However, these movements were fuelled neither by political nor by moral issues. What motivated them were certain fundamental principles, such as authority and religion, both of which were rooted in Islam. In motivating Islamist terrorists, the extremist leaders successfully exploited the potentials of these principles aided by deep-rooted religious sentiments, through creating a social and religious medium which, both morally and legally, approved the terrorist acts. This is a phenomenon with very strong ideological foundations.

The best proof of this is the ability of radical Muslim organizations to recruit new members, deploy their members abroad, and support various dormant terrorist cells (the terrorists who took part in the 9/11 attack are a good example of this), without succumbing to the temptation of western culture.

‘Al Qaida’ means ‘network’. Everywhere in the world there are small, clandestine cells run by people who live among us. In the age of Internet, which in itself is a global network of communication, activities – such as creating a line of communication, disseminating information, establishing communication within the organization, releasing the viewpoint of that organization, broadcasting and

publishing intimidating, terrorizing propaganda – have become aims simple to pursue. Al Qaida is an international network in which the core unit provides the background to all activities, while the task of local members of the network is, quite simply, to pursue these activities. But why such a sophisticated system should be created? This organization has been created with the aim of fighting western civilization which, according to the masterminds of the organization, exploits developing countries in the Third World.

Consequently, when faced with the problem of addressing the issue of terrorism, it is a mistake to narrow the causes down to the political or social roots of Islamic aggression; by doing so, religious and cultural implications are overlooked. To gain a full understanding of the driving force behind terrorists and to be capable of tackling problems efficiently with the aim of eliminating them, the religious and ideological aspects of the issue should not be overlooked.

It is necessary to emphasize, though, that the war on terror is not to be interpreted as some sort of fight against the entire East or the Arab people, their culture or the Islam. It is a war against the institutions of terror (political groups, arms trafficking, training camps, banks involved in money laundering and the terrorists themselves), all of which, in line with the ideas rooted in radical, political or militant Islam, engage in actions leading to terrorist attacks by pursuing their political interests.[2]

Fundamentalism, an extreme phenomenon associated with Islam

We live in a time when fundamentalist Islam is perceived to have been gaining ground, just like modernity. One might ask the question “which is the stronger trend within Islam: fundamentalism or modern thinking?” The latter stands for religiousness viewed from a flexible perspective. Existing trends of modernization can, at the same time, be traced back to intensifying trends of globalisation. The effect of those trends on Islamic society is significant not only from an economic, political or ideological point of view; the influence of various other effects generated externally is to be felt to a considerably greater extent today in terms of the conditions capable of extending their influence on the internal development of Islam. Both fundamentalism and modernity are significant, mainstream trends within Islam. However, fundamentalism becomes considerably more palpable when, for example, we are confronted with the sight of a bloody terrorist attack. The response that the events on 11 September 2001, or the more recent terrorist attacks in Paris, Brussels and London, has drawn from certain observers and politicians in voicing their views on those events, resulted in an opinion in which all forms of Islam were conflated, and the label ‘radical’ became an adjective to be used in this context, while Islam was interpreted as a source of threat. That approach is based on a fundamentally erroneous perception of Islam. Islam is composed of a diversity of ideologies, only very few of which can in fact be labelled as dangerous. Jihad is a religious commitment within Islam – one with a double interpretation: in a broader sense, a greater (or spiritual) jihad stands for a more personal religious commitment; a lesser jihad stands for a commitment taken on by both the community and the individual for the protection of Islam and the Muslims.[3] Modern Islamist terrorism is a natural consequence of 20th century Islam fundamentalism. The emergence and strengthening of a radical Islam in the Arab world was a response to the appalling conditions within the society: social injustice,

rejection of traditional values, refusal of foreign dominance and foreign culture. This movement makes the claim that the reason behind the malfunctioning of modern Muslim societies is the departure of those societies from the “right path” (as-sirat al-mustaqim), and that the solution to all problems is the return to the original Islam. The problems themselves have social and political roots: inequality, corruption and oppression, given that the fundamental doctrine of Islamic society is “social justice”. This is a label that sits at the core of a conceptual interpretation given by almost every theoretician. At the same time, traditional Islam politics and religion are not separated (a concept at the heart of the ideology adopted by Islamist fundamentalists). The basic assumption here is that Islam is superior to religion, government (regime, ‘din wa-dawla’) and all human activities. Whatever is the problem, the solution is always Islam.

Radical Islam advocates an ideology according to which perfection originates from the Prophet’s[4] lifestyle and the events of the age in which he lived. Consequently, any form of religious invention, philosophical relativism, intellectual or political pluralism is to be considered heresy. An ideology like this only allows for a system with two opposing sets of ideology, Dar-al-Islam[5] and Dar al-harb[6]. The fight between them will go on until Islam proves to be victorious. Although these principles are only upheld by radical and extremist advocates, mention should be made of the fact that they are also deep rooted in that division of Islam which is followed by the vast majority of its believers.

Until as late as the 1980s, Islam fundamentalist movements such as the Muslim Brotherhood and the Al-Ikhwan al-Muslimoon were inward looking [7], laying the emphasis on three basic principles: parliamentarism, national unity and national will, claiming that all governments based on the rule of law must comply with these requirements. Absolute power does in fact come from God, but it is the nation, the ummah that has been entrusted with the executive force behind that power, therefore any Islamic government must be based on parliamentarism and it must be answerable to the nation itself. Therefore, those representing power do not rule over the people – they serve them, while a government is to be led by the Ulama[8], in accordance with the principle of debate (as-sura). Western superiority was ascribed to the fact that the Muslims no longer abode by the teachings of the Prophet. Consequently, the first step in tackling this problem was to re-Islamize the population first, then to create Islamic governments based on Islamic law (Sharia). Viewed from this perspective, jihad[9] mostly targeted apostate Muslim governments and societies, while the bellicose branch of Islam, created with the aim of attacking on grounds of a historical perception to target the faithless, had no specific objective to pursue (until the emergence of the Caliphate). Jihad is one of the most controversial labels in the Islam world, known to have given rise to diametrically opposed views and interpretations. Besides, jihad is a phenomenon with a vast body of literature.[10]

In accordance with the military traditions of Islam, Muslim troops are only allowed to withdraw if the enemy has twice as many troops as the Muslims do. Other traditions only allow withdrawal if Muslim troops are outnumbered by the enemy forces by ten to one. The reason behind this is that jihad itself, according to some definitions, is equivalent with the faith placed in Allah. In a situation when Muslims encounter an enemy that is either weaker than their forces or is about as strong as they are, Muslims will rely on their own strength. If, however, they stand no chance

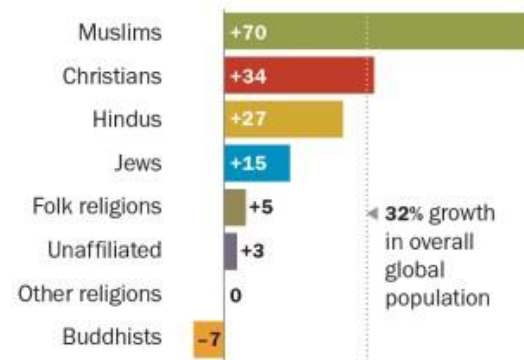
whatsoever of defeating the enemy, the Mujahedeen[11] will prove themselves through their blind faith in Allah, and this is why their deed will be appreciated.

‘Bello ergo sum’ (I fight, therefore I exist) is a mentality which was successfully created by the political attitude of Islamists. Because of this, Islamist leaders need the popular jihad to maintain their grip on power. Consequently, the role of the United States in the Iraq conflict will have far-reaching consequences for radical Islamist movements. America’s failure to achieve the expected results would just add fuel to the fire, strengthening the apocalyptic ideology of jihad.

Islam is today the religion of more than 1.6 billion Muslims around the world, making Islam the world’s second-largest religious tradition after Christianity. [12] Muslims can be found widely stretching from the Atlantic to the Pacific, across Africa, parts of Europe, and Asia. 60% of the Muslims live in Asia.

Muslims projected to be fastest-growing major religious group

Estimated percent change in population size, 2015-2060



Source: Pew Research Center demographic projections. See Methodology for details. "The Changing Global Religious Landscape"

PEW RESEARCH CENTER

Figure 1[13]

Partly because of the importance of Muslims in world affairs, the West has begun to take special interest in studying the Islam and is trying to understand its relation to the life of Muslims. And it is no exaggeration to say that the Muslims themselves are showing a similar interest in studying the reality of Islam, in order to know to what extent they may be able to adopt modern ways, without losing their religion. In recent times there have been two parties amongst the Muslims: one of them maintaining that religion should be sacrificed for the sake of modernization, and the other emphasizing that modernization should be sacrificed for the sake of religion. Between these two groups there is now a third, whose number is increasing, which

sees a possibility for reconciliation between the modern life and the old religion. The modern Muslim thinkers find in the principles of Islam a flexibility, which allows them to explain and interpret the Islam with the greatest freedom, while still keeping the faith intact. For example, one modern writer has said, "Obedience to the commands of nature is obedience to God."

We, who live in Europe we know, that Europe's borders have not been closed completely just partly, but can be shut down anytime, if the number of migrants reaches a certain number.

The size of the European Muslim population in 2050 depends largely on the future of migration
Estimated and projected Muslim population shares

Country	2010	2016	2050 zero migration	2050 medium migration	2050 high migration
Cyprus	25.3%	25.4%	25.5%	26.6%	28.3%
Sweden	4.6	8.1	11.1	20.5	30.6
France	7.5	8.8	12.7	17.4	18.0
United Kingdom	4.7	6.3	9.7	16.7	17.2
Belgium	6.0	7.6	11.1	15.1	18.2
Norway	3.7	5.7	7.2	13.4	17.0
Netherlands	6.0	7.1	9.1	12.5	15.2
Italy	3.6	4.8	8.3	12.4	14.1
Denmark	4.0	5.4	7.6	11.9	16.0
Finland	1.2	2.7	4.2	11.4	15.0
Europe overall	3.8	4.9	7.4	11.2	14.0
Germany	4.1	6.1	8.7	10.8	19.7
Austria	5.4	6.9	9.3	10.6	19.9
Switzerland	4.9	6.1	8.2	10.3	12.9
Malta	0.2	2.6	3.2	9.3	16.2
Bulgaria	11.1	11.1	12.5	9.2	11.6
Greece	5.3	5.7	6.3	8.1	9.7
Spain	2.1	2.6	4.6	6.8	7.2
Luxembourg	2.3	3.2	3.4	6.7	9.9
Slovenia	3.6	3.8	4.3	5.0	5.2
Ireland	1.1	1.4	1.6	4.3	4.4
Portugal	0.3	0.4	0.5	2.5	2.5
Croatia	1.5	1.6	1.8	2.0	2.1
Hungary	0.1	0.4	0.4	1.3	4.5
Czech Republic	0.1	0.2	0.2	1.1	1.2
Estonia	0.2	0.2	0.2	0.8	1.0
Romania	0.3	0.4	0.4	0.8	0.9
Slovakia	0.0	0.1	0.1	0.6	0.7
Latvia	0.1	0.2	0.2	0.2	0.4
Poland	0.0	0.0	0.0	0.2	0.2
Lithuania	0.1	0.1	0.1	0.1	0.2

Notes: In zero migration scenario, no migration of any kind takes place to or from Europe. In medium migration scenario, regular migration continues and refugee flows cease. In high migration scenario, 2014 to mid-2016 refugee inflow patterns continue in addition to regular migration. Estimates do not include those asylum seekers who are not expected to gain legal status to remain in Europe.
Source: Pew Research Center estimates and projections. See Methodology for details.
"Europe's Growing Muslim Population"
PEW RESEARCH CENTER

Figure 2[14]

But just how many Muslims are there in Europe? While Muslims are still a relatively small share of Europe's population (roughly 5%=44 million), they are set to continue rising as a percentage of Europe's population. The focus is on the

radicalisation, when we talk about the growth of Islam. The problem is not that the Islam is growing, the problem is, when the Muslim radicalization is growing, and unfortunately the growing of Islam brings with itself the growing of the radicalisation as well in Europe.

The clash of civilizations?

The issue of Islam versus the civilization of the West should not be overlooked. Problems rooted in this delicate subject need to be addressed. From the emergence of Islam, i.e. for almost fourteen centuries, there has been a conflict between Islam and the West, Islam and Christianity. While these conflicts occasionally took the form of a peaceful rivalry, they often led to serious, protracted armed conflicts that claimed the lives of many. Although such hostilities were sometimes motivated by religion, the underlying reasons were, however, much more often related to politics, power, economy or other considerations. Neither side can be blamed unilaterally for these conflicts. Each side is looked upon by the other as a culture very different in terms of its crucial elements; a threatening, alien entity entirely different from 'us'; it is the source of constant danger and is likely to attack us at any moment. The origins of Islam go as far back as the conflict between Muhammad and the inhabitants of Mecca, by whom he was rejected. In 622, which was the beginning of the Hijra era, Muhammad laid the foundations in Medina of a theocratic society governed by Sharia law. Sharia is the collection of divine laws, set out in the Quran and the Sunnah, which was subsequently formed into a system by the four major schools of laws in Islam[15]. Around three quarters of these religious laws focused on the structural aspects of the state, while the remaining part was a detailed, comprehensive description of the case law in respect to the relationship between the individual and the society. Hijra was, therefore, a point in time when Islam as a religion became an Islamic society. Politics and religion having merged, they now make up one entity.

In principle, this means that neither a pluralistic nor a laic society is acceptable for Islam. Mind you, this principle cannot be applied everywhere. We know, for instance, that some Islamic countries are keen to separate the church from the state, i.e. they promote the idea of a secular state. One such state is Turkey which, by having adopted this view, wishes to demonstrate its suitability for EU membership. It can be said, however, that no such thing as a secular state exists from the point of view of an Islamic society. By contrast, according to the European interpretation of this issue, church and religion must be separated. What we are seeing in the Middle East is that the political systems are run either without democracy or are based only on a limited sort of democracy.[16]

In accordance with the teachings of the Quran, the only acceptable religion for Muslims is Islam. In this respect, there is no difference between Islam and Christianity, which is, naturally, a universal faith. The clash between these two universal religions was inevitable. History is a demonstration of this antagonism. It is my belief that if Islam and Christianity prove to be incapable of joining forces today for the betterment of our world, this failure will, yet again, put them on a collision course. The problem lies in the fact that Islam is not just a religion – it is a system that incorporates religion, society, politics and culture. It is a lifestyle that requires full commitment from the individual – in that respect, it is the equivalent of Christianity

in the Middle Ages, which dominated every dimensional aspect of the society: religion, politics, culture, social relationships and family ties. This is the reason why it is difficult to view Islam objectively today, particularly in Europe.

I am of the view that existing conflicts do not necessarily have to be completely eliminated. Rather, they need to be tackled by focusing on the real priority – to reduce damage as much as possible. There is more to it than the looming danger of Islamism. The prayers and piety of Muslims, along with the significance of God in the lives of ordinary people should certainly give us some food for thought. This all goes to show that ‘dialogue’ is not the right word to describe the current situation between Christianity and Islam. A more accurate term to characterize the atmosphere would be ‘confrontation’. A broad array of obstacles to rapprochement would, among other things, need to be overcome, whereas expressing an opinion and adopting a position on the issue are crucial factors in the current situation. The fact that Islam is a growing religion, coupled by our historical experience, has to be taken seriously.

Until recently, Europe’s attitude towards Islam was based on tolerance and inclusion. On account of the values it stands for and because of its fascinating culture, Islam was considered a respectable religion. More recent developments, however, have had a disquieting effect on Europe. Examples that come to mind immediately are the events on 11 September 2001, the terrorist attacks in Paris, Brussels and London. Those events have changed Europe’s stance on the issue of Islam. A symbolic, negative speech used by George Bush (“the axis of evil” versus the “Good Empire”, the latter being America, naturally) did not help to solve the problem. On the contrary, it has reinforced the hypothesis conveyed by Samuel Huntington’s book entitled “The Clash of Civilizations and the Remaking of World Order”, according to which, a conflict between Islam and the western world is inevitable. Although the problem of an anti-Islam attitude adopted by the “West” (which, in this context includes Hungary as well), coupled with a lack of interest in that religion, disinterest in as well as misinterpretation of the diversity and values of Muslim culture, is not a recent phenomenon on our continent. This trend is significantly more perceptible today. One of the consequences of the tragedy of deadly terrorist attacks on America, in the wake of which hatred was seen flaring up, was that the media became a mouthpiece of anti-Islam views, a number of which sometimes denounced Islam as a global evil behind those acts of terrorism. Such opinion was based on misconceptions and misinterpretations of the teachings of Islam. At the same time, long-term peace cannot be achieved without a broader dialogue between various cultures and religions. Parts of Pope John Paul II’s speech made in Damascus, along with an existing scholarly relationship with Islamic universities yet to be widened by additional ties, are signs of a new mindset ready to review the ‘traditional’ stance on Islam culture.[17]

Today Islam in Europe is perceived to be gaining ground against Christianity in a big way, due to the fact that Christianity is on the wane and the number of Christians practicing their religion has plunged into an all-time low level. In the wake of all this, it remains to be seen which out of the two contrasting scenarios are likely to take shape: Christianity will either undergo a period of renewal by giving itself a new impetus, or the spiritual gap left by that religion, faced by its dwindling popularity, will be filled by Islam, eastern religions or esoterica.

I believe that Europe is not in a position to indulge itself in self-contemplation, thereby creating a sense of security in which peace and safety prevail within its own frontiers. Europe is in need of “ambitious goals”. A lack of perspective or absence of aims will cause Europe to lose its identity. For hundreds of years Europe, driven by the spirit of expansion and the ambitions of a great power, had not shied away from the prospect of becoming a universal conqueror. Today, however, it needs to be guided by the principle of service and responsibility to become open to the world. Europe today should be the provider of help to other, non-European countries in order to find its own identity.

Economic unity having been achieved, Europe now has to aim for political unity. Economic unity itself was not an easy task to accomplish, given the fact that this environment, in which a diversity of economies prevails, made it difficult for all economy-related requirements to be met within the European Union, at any time. To create political unity is, perhaps, a task even more difficult to accomplish. European countries are both determined and characterized by their own history, culture, awareness of their identity and national values. The creation of a political unity requires a sense of compromise, as well as a considerable sacrifice from all countries involved. The question is whether that unity will eventually be created.

What should the relationship between Europe and the Muslims be like? This question is difficult to answer. On the one hand, immigrants should be treated with sympathy and humanity – these are people who feel both lost and helpless in a culture completely alien to them. It is therefore absolutely clear that immigrants need help to blend in. On the other hand, a receptive and sympathetic attitude does not mean that one’s own culture should be abandoned and that a completely open attitude must prevail in all situations. A so-called radical Islamic fundamentalism within Islam also exists. People in America and Europe today are filled with apprehension as a result of the teachings, actions and ‘anti-western’ attitude of this trend, although it is a huge mistake to identify radical Muslim movements with Islam as a whole[18], not least because the vision of these movements is limited to the Islamic state, which they wish to create at any cost, even if it entails the use of violence[19].

When dealing with the issue of European openness, any compromise viewed from the vantage point of a security policy is out of the question when it comes to those movements that are related to Islamic fundamentalism. It was this very openness that made it possible for small groups of extremists in certain European cities to mastermind the terrorist attacks on 11 September. We need to be aware of this in trying to tackle the problem of openness.

A lesser strand within Islam focuses on the notion of an open, enlightened and liberal Islam. Representatives of this movement are the likes of Bassam Tibi in Germany or Mahamed Arkoun in Paris. In my view, both a Christian-Islamic dialogue and a dialogue within Islam need to be supported, thereby giving assistance to radical and liberal Muslims in coming to grips with the problems arising from their differences.

It can be said with absolute certainty that the vast majority of Muslims have no wish to join the jihad or to turn their religion into some sort of politicized ideology. The western assumption behind terrorist attacks very often associates these acts with

a rational cause that motivates them. The conclusion drawn from this is that dealing with political problems properly will help solve the underlying problem[20]. But if problems at the heart of the matter are not political in nature, it is naïve to assume that gestures made at a political level will lead to a shift in the rationale of radicals. Any attempt to deal with terrorism in isolation, as distinct from its intellectual, cultural or religious roots, is doomed to failure. A long-term strategy can best be served by focusing on the cultural and religious roots of radical Islamism. To keep the problems at bay will only be possible if we are familiar with the Islamic mindset and the religion itself. In this respect, the West does, regrettably, have a lot of catching up to do.

When it comes to Islam as a religion, the situation today is characterized by a profound lack of knowledge. The Muslims, at the same time, should make the unequivocal statement that “real Islam does not harbour terrorism.” According to Islam, killing a human being is tantamount to being faithless. No one can take the life of another human being. Not even in a wartime situation should an innocent human being be exposed to acts of evil.

No one has the authority or power to issue a fatwa on this matter[21]. No one is allowed to become a suicide killer. No individual wearing an explosive belt has the right to thrust his way into a crowd with the aim of attacking it. No matter what their religion is, Islamic law quite simply does not allow any such act to be committed against people. Even in a wartime situation – when it is difficult to strike a balance between what can or cannot be done – any such act is strictly forbidden[22].

To make a clear-cut distinction between radical and orthodox Islam is the only feasible solution to this problem. Solidarity within the Muslim world plays into the hands of radical Islamists. Only a culture-based struggle between Islamist radicals and moderates can re-shape the frontiers between those factions, so that the latter might emerge as the winner of that fight. It is of crucial importance that awareness of the religious foundations of Islamist terrorism should centre on that struggle, in order to provide a counterweight to Islamist radicalism, and to be welcomed by the moderates as well as the wider public. Contrary to what many assume to be the case, the Quran offers no encouragement to perpetrate violence[23]. This alternative interpretation needs to rest on rock solid religious foundations and has to come from highly distinguished, widely acclaimed Islamic scholars and leaders. Equally important is the acceptance by the wider public of religious views that distance themselves from the views of Islamist extremism. Given the proliferation of acts of violence, I believe that this is the only viable option for Islam to follow all over the world, now transmogrified into a place where violence is perpetrated in the form of terrorism leading to the loss of innocent lives. Despite the fact that the situation in which the battle is to be fought is fraught with difficulty – given the erratic nature of asymmetric warfare – efforts have to be made to win over the most competent, highly professional experts both from the West and from Islam, in order to cope with the aftermath of specific conflicts.

As a final note, while talking about a clash of civilizations, we cannot let the events that we have seen unfolding in Norway go unnoticed. I firmly and unequivocally denounce all forms of violence, be it perpetrated by the Western or by the Islamic side. Extremism, due to a wide array of reasons, is a trend that has also intensified in the West. One reason for this is that the European Union, following the principle of free exercise of religion, has until now imposed virtually no constraint on

people practicing their religion on the European continent. There is nothing wrong with a thumb up on the construction of mosques, minarets or Islamic schools. But what is the compensation offered for all of this? Is the number of Christian churches and schools on a par with the number of mosques and Islamic schools built? There are Christians – quite a number of them – living in Islamic countries, not just Muslims living in the West. There is an undeniable discrepancy in the figures. Moreover, Western migration policy is far from being liked by all sides affected. In Europe it is the Scandinavian countries that have adopted the most open-minded attitude towards the issue of migration. There is nothing wrong with that, either. Apropos of this paper, however, we need to both contemplate ideas and make a re-evaluation in terms of how Islam and the West (Muslims and Christians) will be able to coexist without infringing upon each other's freedom.

Globalization and interdependence in the last few decades have become so ubiquitous that no country today can claim to be unaffected by this. Countries in the Islamic world have also become part of the global (capitalist) economic system. Given the structural problems of their economies, these countries have to accept the reality of global economy. In the past two decades, all countries – irrespective of the fact whether their economies were under nationalist/socialist, liberal, secular or Islamic political leadership – had been forced, either due to a pressure coming from the International Monetary Fund, or to their own volition, to pursue policies of restriction and to adopt measures which were in conformity with the requirements imposed by the Monetary Fund.

The world is not becoming universal. Today it is in the midst of globalization, but globalization has to go hand in hand with multiculturalism and cultural diversity. Otherness will be part of our world for a long time to come. Scientific and technological advance will not eliminate otherness. On the contrary, it will make it possible for different civilizations to preserve their characteristics and, based on their own traditions, to become capable of going through a process of modernization. This might be a possible future alternative for the Islamic civilization as well. While reaffirming its continued – and modified – commitment to traditions, Islamic civilization will have to react flexibly – just like it did during the first few centuries of its existence – to whatever new phenomena it encounters by embracing and integrating them into its own traditions[24].

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- [5] Name of territories belonging to the world of Islam that are under Islamic authority. This category was established concurrently with the creation of Islamic law, as part of legal regulations pertaining to Islam and the external world, thereby separating territories under Islamic rule from "hostile" territories (Dar al-harb).
- [6] Name of the world of war, pertaining to territories under non-Islamic rule.
- [7] The organization was founded by Ahmad Hassan al-Banna in 1928. Its aim was to restore the original values of Islam and to establish a society based on Islamic foundations. It had a wide range of Islamic programmes, running schools, sanitarian and educational institutions. Their spiritual leader was Sayyid Qutb. The ideology of the organization today is devoid of violence and accepts the parliamentarism. It has organizations in many Islamic countries.
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ISLAMIC STATE– IS IT A GUERRILLA OR A TERRORIST ORGANIZATION?

Abstract

The article intends to clarify the difference and similarity between terrorism and guerilla warfare, meanwhile explaining in details the methods used by terrorists and insurgents, and describing the circumstances that led to the establishment of a Caliphate. It analyzes the political objectives and the military strategy pursued by the Islamic State, which is using terrorist and guerilla methods to achieve its short- term and long-term objectives. The author draws comparison between the “Mini- manual” of Carlos Marighella and the activities of the Islamic State, concluding that religion plays an important role in Islamist terrorism.

Keywords: DAESH, ISIS, terrorism, guerilla warfare, Caliphate, “Mini-manual”, Sharia, Shura Council, several terrorist organizations.

Introduction

At the beginning of the 21st century, the world saw as the World Trade Center was destroyed, the Pentagon was attacked, all claimed about 3,000 victims, and the United States was attacked by a non-state actor, namely by the al-Qaeda. After the attacks, the United States launched a global war against terrorism, and as a result, the al-Qaeda name became an ideology and a method.¹ A new organization emerged from the al-Qaeda in Iraq, now known as the Islamic State, Islamic State of Iraq and the Levant, Islamic State of Iraq and Syria, or Daesh.² The Daesh made 4,443 incidents between November 2012 and the end of 2016. As the Global Terrorism Index shows, since 2014, eighteen of the thirty-three OECD countries (Organization for Economic Cooperation and Development) were attacked by the organization that was responsible for three quarters of all deaths – 453 deaths. The Index also titled the Daesh as the deadliest organization in 2016, responsible for 9,132 victims.³ All in all, the Islamic State is not a real state and not a simple terrorist organization, it is an ideology. The ISIL on the other hand, can be described as an organization having terrorist and guerilla features, aspired to expand the radical Islam and establish a long-live caliphate.

Arnold Wolfers’ definition of security gives an objective (absence of threat) and a subjective sense (absence of fear). In the dissertation of János Béres, four main

¹ KIS-BENEDEK József: A nemzetközi terrorizmus jelenlegi tendenciái Európában, In: Felderítő Szemle, 2006. 5. vol. special edition, p.30.

² To be clear, during this essay I am using the word Daesh or ISIL to name the core organisation and Islamic State for the whole global organization.

³ Global Terrorism Index 2017, <https://reliefweb.int/sites/reliefweb.int/files/resources/Global20Terrorism20Index2020172028429.pdf> (accessed: 2018.02.25.), pp. 4-5.

features of terrorism were defined: made by non-state actor, directed against unarmed civilians, conducted for political goals, and posing threat by violence.⁴ According to the Standard Eurobarometer 2017, the immigration and terrorism are the two main concerns in the European Union. From the six most mentioned items in the question: “What do you think are the two most important issues facing the EU at the moment?”, terrorism took the second place.⁵ By the two definitions and the data of Standard Eurobarometer, we can conclude that the target of terrorism is the civilians or with other words the subjective sense of the nation’s security.

In respect of the mentioned data above, the aim of my essay is to define whether the Islamic State is a guerrilla or a terrorist organization. However, important to mention that it is not my intention at all to give any judgment about the authors’ work on guerrilla warfare or even about the Islamic State or its any affiliations. However, important to note that there is no clear line between terrorism and guerrilla warfare, so later on, in my essay, sometimes the two phenomena can cover each other.

Differences between terrorism and guerrilla warfare

By definition “*the term ‘Guerrilla Warfare’ appeared in the modern lexicon during the Napoleonic Wars. It can be described as a form of warfare, meaning method used to pursue an objective, as opposed to a type of war like Total War or Limited War. In Samuel Huntington’s comprehensive definition: Guerrilla warfare is a form of warfare by which the strategically weaker side assumes the tactical offensive in selected forms, times, and places. Guerrilla warfare is the weapon of the weak. It is never chosen in preference to regular warfare; it is employed only when and where the possibilities of regular warfare have been foreclosed.*”⁶ On the other hand, terrorism can be described as Benjamin Netanjahu did. He defines terrorism as “*a systematic, intentional violence on civil society, which would like to realize political goals through the evoked fear.*”⁷ Terrorism also can be defined as of István Resperger – “*Terrorism is what terrorists (individuals or organizations) do for political aims against civil population, as an activity with violence, in order to force their will to their opponents.*”⁸

Terrorism and guerrilla warfare cannot be described as two phenomena without any connection to each other. Guerrillas and insurgents – in this case are the same – they operate in small groups against a stronger enemy and try to avoid open fight. They gain their advantages from the knowledge about the territory and the support of

⁴ BÉRES János: Napjaink muszlim terrorizmusának gyökerei és visszaszorításának lehetőségei, Doktori (PhD) értekezés, Zrínyi Miklós Nemzetvédelmi Egyetem, Budapest, 2008, p.12.

⁵ Standard Eurobarometer 88 – Autumn 2017, ec.europa.eu/commfrontoffice/publicopinion/index.cfm/ResultDoc/download/DocumentKy/81148 (accessed: 2018.02.25.), p. 7.

⁶ IBRAHIM, Azeem: Conceptualisation of Guerrilla Warfare, In: Small wars & Insurgencies, 2011. 15. vol. no. 3., p.112.

⁷ NETANJAHU, Benjamin: *Harc a terrorizmus ellen*, Alexandra Kiadó, Pécs, 1995, p.20.

⁸ RESPERGER István: *Kis háborúk nagy hatással. A XXI. század fegyveres konfliktusai, a terrorizmus és az aszimmetrikus hadviselés jellemzői*, In: *Felderítő Szemle*, 2013. 12. vol. no. 1., p. 201.

the population. As János Béres defines the insurgents: *“They are not isolated, they are exactly the opposite, and they have a huge mass support. [...] The insurgents always fight for political power – this is the main motivation as well –, their aim is to create a so called counter-state, which has its circumscribed territory and struggles to change the current political situation, ... and they fight for legitimation.”*⁹ The definition of guerrilla, as Che Guevara wrote: *“[...] the guerrilla fighter is a social reformer, that he takes up arms responding to the angry protest of the people against their oppressors, and that he fights, in order to change the social system that keeps all his unarmed brothers in ignominy and misery. He launches himself against the conditions of the reigning institutions at a particular moment and dedicates himself with all the vigor that circumstances permit to breaking the mold of these institutions.”*¹⁰

Krisztián Répási says that terrorists would like to make a political change in favor of fulfilling their political goal, but they have no territorial claims.¹¹ However, János Béres supplements this by the fact that a terrorist organization works in illegality and there is no mass support, only a limited one.¹² All in all, there is no clear line between the guerrilla and terrorist organization – only in the law, where terrorism is a crime, while the insurgent and guerrilla warfare is not. Insurgents and guerillas are “combatants”. According to this, the Islamic State of Iraq and Syria can be described as a guerrilla group; however it uses terrorism as a tool to reach its goals.

	Guerrilla and insurgent	Terrorist
Goal	To take over the political power and establish a counter-state	Punishment, intimidation, killing
Method	Asymmetric warfare and terrorism, justified “method of action”	Pure terrorism as a “logic of activity”
Target	Invaders, representatives of the power	Soft power
Support	Population as a mass base	Small groups of sympathizers

*Table 1. – Comparison of the insurgents and terrorists*¹³

⁹ BÉRES János: Napjaink muszlim terrorizmusának gyökerei és visszaszorításának lehetőségei, Doktori (PhD) értekezés, Zrínyi Miklós Nemzetvédelmi Egyetem, Budapest, 2008, p. 14.

¹⁰ GUEVARA, Ernesto Che: Guerrilla warfare, http://www.thefrontiersmen.org/pdf/Misc%20Handbooks/Che_Guevara_Guerrilla_Warfare.pdf, p. 7. (accessed: 2018.03.01.)

¹¹ RÉPÁSI Krisztián: A gerillaharc és a terrorizmus szerepe a felkelésekben, In: Nemzet és Biztonság, 2011. 4. vol. no. 4., p. 37.

¹² BÉRES János: Napjaink muszlim terrorizmusának gyökerei és visszaszorításának lehetőségei, Doktori (PhD) értekezés, Zrínyi Miklós Nemzetvédelmi Egyetem, Budapest, 2008, p. 14.

¹³ BÉRES János: Napjaink muszlim terrorizmusának gyökerei és visszaszorításának lehetőségei, Doktori (PhD) értekezés, Zrínyi Miklós Nemzetvédelmi Egyetem, Budapest, 2008, p. 15. - translated by Márk Károly Kovács

Guerrilla and insurgent methods used by Islamic State

The phenomenon emerged under the umbrella of al-Qaeda, from 2011, after the Arab Spring and the regional conflicts became serious, and the civil war broke out in Syria and the vacuum after the fall of Saddam Hussein in Iraq since 2003 have emerged.¹⁴ The Sunni population of Iraq faced the loss of their influence in policy and economy or even in their priority inside the population. The loss and the Sunni-Kurdish-Shiite¹⁵ rivalry for power made the country and the population a target in the eye of the al-Qaeda. According to József Kis-Benedek, during that time, the al-Qaeda was sponsoring random insurgencies against the unbelievers' governmental system – in a form of Islamic State, and the Syrian and Iraqi governments were the targets.¹⁶ After the death of the original – al-Qaeda in Iraq – leader, Abu Musab al-Zarqawi, the group reorganized itself under Abu Bakr al-Baghdadi and launched its new campaigns. The 'new' organization occupied – and later lost – the city of Mosul, Aleppo, Raqqa, Fallujah, etc... and declared the establishment of the Islamic Caliphate on 29 June 2014 in Mosul.

The caliphate as a concept, referring to unify the Muslim community, to become a state – the creation of a state is one step closer to rule the whole world under Islamic law –, and to be expanded by successors of Mohammad – the ultimate holistic goal of Islamism.¹⁷ Although the emirate is a worldwide and well-known entity, however; as a higher entity of the emirate only one Caliphate can exist. On the other hand, there can be many emirates, which merely denote the army and policy, controlled by its leader, the emir. By the declaration of the Caliphate, ISIS proclaimed an obligation for all Muslims; and anyone rebels against it, becomes a renegade and will be allowed to fight against him. However, all Muslims should support the aims of the Caliphate and pledge loyalty to its leader.¹⁸ Nonetheless in 2011, al-Qaeda in the Arabian Peninsula has already made an effort to establish an emirate and control an exact territory in Yemen.¹⁹

During their best years, the Caliphate controlled over 22-25,000 km² – this means that the group controlled 40% of Iraq and other territories. The Iraqi government failed to restore its rule over the occupied areas. Max Singer stated that the brutality supported the recruitment process, even in Europe, despite the fact that it led to a

¹⁴ KIS-BENEDEK József: A nemzetközi terrorizmus jelenlegi tendenciái Európában, In: Felderítő Szemle, 2006. 5. vol. special edition, pp.14-15.

¹⁵ Shiite or Shia Islam, both form are accepted and means the same, during the essay I use the term of Shiite.

¹⁶ KIS-BENEDEK József: Az Iszlám Kalifátus és a globális dzsihad új tendenciái, http://mhtt.eu/hadtudomany/2014/3_4/2014_3_4_2.pdf (accessed: 2018.04.03.), p. 27.

¹⁷ SINGER, Max: Militant Islam's war against the west, 2018, <https://besacenter.org/mideast-security-and-policy-studies/militant-islams-war-against-west/> (accessed: 2018.03.19.), p.13.

¹⁸ KAGAN, Frederick W. – KAGAN, Kimberly – CAFARELLA, Jennifer – GAMBHIR, Harleen – ZIMMERMAN, Katherine: U.S. Grand Strategy: Destroying ISIS and Al Qaeda – Report one, <http://post.understandingwar.org/report/al-qaeda-and-isis-existential-threats-us-and-europe> (accessed: 2018.02.03.), pp. 19-20.

¹⁹ KIS-BENEDEK József: The Islamic State and the intelligence, In: Nemzetbiztonsági Szemle, 2015. 3.vol. special english edition, p. 37.

general unpopularity;²⁰ however, brutality and unpopularity can be debated. For example, István Resperger noted that the unpopularity is rather doubtful, because a part of the 9 million Sunni citizens, who suffered after the US invasion in Iraq in 2003, supported the Caliphate. According to the writing, the popularity and the public support are demonstrated also by the high number of the members of Islamic State. From 2005 until 2015, the number of members raised from 1,000 to 31,500. The number of foreign fighters (individuals who leave their home to participate in a fight for a cause and identify themselves with this cause; however, the most important for them is to meet the requirement to fight in insurgent groups, such as in the case of the Islamic State)²¹ was around 20,000. For them, the tempting materials were the free brutality and violence, the salary between USD 300-2,000, and the feeling of victory.²² By mid-2014, the United State started an active military presence in Iraq, as a reaction to ISIS and its territorial gains. It means that after the assassination of the emir of Jabhat al Nusra in Raqqa in 2013, al-Qaeda broke its relations with the Islamic State in February 2014 and a national state entered “the game” on the side of its enemy – to be more accurate the United State entered the game with a common goal to win against the Islamic State.²³

Political aims of the Islamic State:

- to overthrow the governments of Iraq and Syria;
- to establish a Caliphate;
- to extend the territory of the Caliphate.

Grand strategy of the Islamic State:

- to stabilize the Caliphate;
- to attract the Muslim population to the caliphate’s territory;
- to expand around the whole world.

Military strategy of the Islamic State:

- to gain control over the Sunni area and rule the critical infrastructures;
- to establish a safety zone against the Kurdish attacks;
- to demolish the military force of Iraq and Syria;
- to neutralize the force of Jabhat-al-Nusra.²⁴

²⁰ SINGER, Max: *Militant Islam’s war against the west*, 2018, <https://besacenter.org/mideast-security-and-policy-studies/militant-islams-war-against-west/> (accessed: 2018.03.19.), pp.14- 15.

²¹ FRITZ, Jason – YOUNG, Joseph K.: *Transnational Volunteers: American foreign fighters combating the Islamic State*, <https://www.tandfonline.com/doi/full/10.1080/09546553.2015.1096783> (accessed: 2018.03.02.), pp. 1-2.

²² RESPERGER István: *Az erőszak helye szerepe az Iszlám Állam terrorszervezet tevékenységében*, In: *Hadtudományi Szemle*, 2015. 8. vol. no. 4., pp.101-103.

²³ HAMMING, Tore Refslund: *The al-Qaeda-Islamic State Rivalry: Competition Yes, but No competitive escalation*, <https://www.tandfonline.com/doi/full/10.1080/09546553.2017.1342634>; p. 1. (accessed: 2017.12.10.)

²⁴ RESPERGER István: *A nemzetbiztonsági szolgálatok tevékenysége – biztonsági kihívások, kockázatok és fenyegetések*, In: RESPERGER István (editor): *A nemzetbiztonsági szolgálatok tevékenysége*, Dialóg Campus Kiadó, Budapest, 2018, pp.78-79.

However, most of the goals, what are listed above, are similar to the goals of the al-Qaeda's 20-year strategy.

Sections	Strategic goals	Date	Tactical goals
1.	“Awaking”	September 11, 2001	Provoke U.S. attack on Muslims, galvanize jihadism
2.	“Opening the eyes”	2002-2006	Force West on defensive
3.	“Arising and Stand Up”	2007-2010	Assaults on Turkey and Israel
4.	“Downfall of Apostate Muslim regimes”	2010-2013	Saudi Arabia, Jordan, oil - producing countries
5.	“Declaration of Caliphate”	2013-2016	Mobilization of Muslim forces
6.	“Total Confrontation”	2016-2020	Total war on “non-believers”
7.	“Definitive Victory”	2020	Establishment of global Caliphate

Table 2: The 20-year strategy of the al-Qaeda²⁵

In 2015, the ISIL had free terrains – deserts, cities and suburban territories –, where it was engaged in war(s). *“ISIS favors maneuver warfare in open deserts, allowing ISIS to attack cities immediately adjacent to deserts from multiple directions, which Iraqi news sources often term “attacks from multiple axes.” ISIS also specializes in insidious urban operations, whereby ISIS infiltrates enemy defenses within large cities, attacks security forces with guerilla tactics, and terrorizes populations to challenge the state’s ability to provide security.”*²⁶

As methods, they use hybridized warfare, which includes conventional warfare, guerrilla warfare and terrorism. To be precise, Frank Hoffman described this type of warfare as: *“Hybrid wars incorporate a range of different modes of warfare, including conventional capabilities, irregular tactics and formations, terrorist acts including indiscriminate violence and coercion, and criminal disorder.”*²⁷ In the cities, they use home-made improvised explosive devices (IED) and suicide vehicle-borne improvised explosive devices (SVBIED) and vehicle-borne improvised explosive devices (VBIED) and suicide vest (SVEST). These are used to demolish the facilities of security forces and police headquarters, which demonstrates that their methods have changed from the methods of a terrorist organization – killing innocent civilians – to the methods of guerrilla warfare, as destroying fixed, mostly military and security facilities or persons. Before, after, and during the attacks against the anti-ISIS

²⁵ Source: KIS-BENEDEK József: Az Iszlám Kalifátus és a globális dzsihad új tendenciái http://mht.eu/hadtudomany/2014/3_4/2014_3_4_2.pdf (accessed: 2018.04.03.), p. 26. - translated by Márk Károly Kovács/

²⁶ MCFATE, Jessica Lewis: The ISIS defense in Iraq and Syria: Countering an adaptive enemy, <http://www.understandingwar.org/sites/default/files/ISIS20Defense20in20Iraq20and20Syria20--20Standard.pdf>; p. 12. (accessed: 2018.02.02.)

²⁷ Ibid. p. 12.

coalition²⁸ the deserts secured the fastest way for terrorists to become invisible, as well as the flexibility to be able to maneuver and to avoid anything during their moves, to be able to hide from the coalition's airstrikes. Via these capabilities, the organization was able to control populated territories. During its time, when it controlled areas, the organization was able to defeat the local forces, until they got some help from advanced industrial powers – for example from the United States or Russia.²⁹

The support of the population is a key element of the guerrilla warfare and the Islamic State enjoys this support. It uses propaganda on Twitter, on the Internet in a form of brutal videos, and its own magazine(s), Dabiq and Rumiyah, to support the “lone wolves” and gain support around the world as well. It can make use also of TV stations in Iraq and Syria, as well as the radio stations. As Robert Taber said: “*The guerrilla fighter is primarily a propagandist, an agitator, a disseminator of their revolutionary idea, who uses the struggle itself—the actual physical conflict—as an instrument of agitation.*”³⁰ The quality of the magazine(s) and the amount of twitter accounts suggest that there is a hardcore infrastructure behind the work. The narratives are usually high-quality, in different languages, which enables the organization to target various audiences. In addition, there is a capability of pushing its messages through a number of mediums. Since early June 2014, the organization started to make reports about key battles and initiatives – usually eight pages in English, but the graphic content is dominating. The Dabiq appeared in July 2014, and it can be called as a kind of copy of al-Qaeda's Inspire magazine – about forty pages in English, mainly articles and speeches with high-quality illustrations. From the video contents, the Flames of War can be named, which showed the captured British photojournalist.³¹ All in all, the Islamic State and the Daesh use the propaganda to glorify its action. In this regard, several basic types of communication can be named: political and religious, virtual talk, and comparisons – the Islamic State and its enemies.³² Because of technological and age differences, the al-Qaeda propaganda (pursued before 9/11) practically cannot be compared to the IS propaganda. The al-Qaeda sent its messages and intentions via VHS cassette and usually there were no English subtitles. However, the Islamic State already gives subtitles automatically so it can maximize the effect of a message.

According to the West Points Combating Terrorism Center and Haroro Ingram: “*There are three levels to IS's media architecture: central media units, provincial information offices and its broader membership/supporter base. IS's central al Hayat,*

²⁸ For further information, see: <http://theglobalcoalition.org/en/home/>

²⁹ CAFARELLA, Jennifer – GAMBHIR, Harleen – ZIMMERMAN, Katherine: U.S. Grand Strategy: Destroying ISIS and Al Qaeda – Report three, 2016, [http://post.understandingwar.org/report/jabhat-al-nusra-and-isis-sources-strength%20\(accessed 2018.02.02.\)](http://post.understandingwar.org/report/jabhat-al-nusra-and-isis-sources-strength%20(accessed%202018.02.02.)), p. 14.

³⁰ INGRAM, Haroro J.: The strategic logic of Islamic State information operations, In: Australian Journal of International Affairs, 2015. 69. vol. no. 6., p.6.

³¹ AL-'UBAYDI, Muhammad – LAHOUD, Nelly – MILTON, Daniel – PRICE, Bryan: The group that calls itself a State: Understanding the Evolution and Challenges of the Islamic State, <https://ctc.usma.edu/app/uploads/2014/12/CTC-The-Group-That-Calls-Itself-A-State-December20141.pdf> (accessed: 2018.3.11.), pp. 49-53.

³² RAMSAY, Gilbert: Dehumanization in religious and sectarian violence: the case of Islamic State, In: Global Discourse, 2016. 6. vol. no. 4., p. 569.

al-Furqan, al-Itisam and Ajnad media centers tend to produce IO that are disseminated online and designed for transnational audiences. Messages from its central media units focus predominantly on major announcements from IS's central command, raising the profile of key events and issues or, in the case of Ajnad, producing audio nasheeds ('hymns') and shura recitations. [...] IS's wilayat information offices produce communiqués that focus on more localized issues and events [...] IS's members and supporters play a crucial role in disseminating IS's official communiqués (exponentially increasing the reach of its IO) and producing and disseminating 'unofficial' IO messaging (exponentially increasing the volume of IS's IO output). [...] The ISIS Twitter Census reveals how IS supporters from around the world have used thousands of Twitter accounts, attracting large 'follower' numbers, and high-volume messaging and activity in an effort to dominate the social media forum. [...] its 'media proficiency', is undoubtedly enabled by IS's tri-tiered media architecture."³³

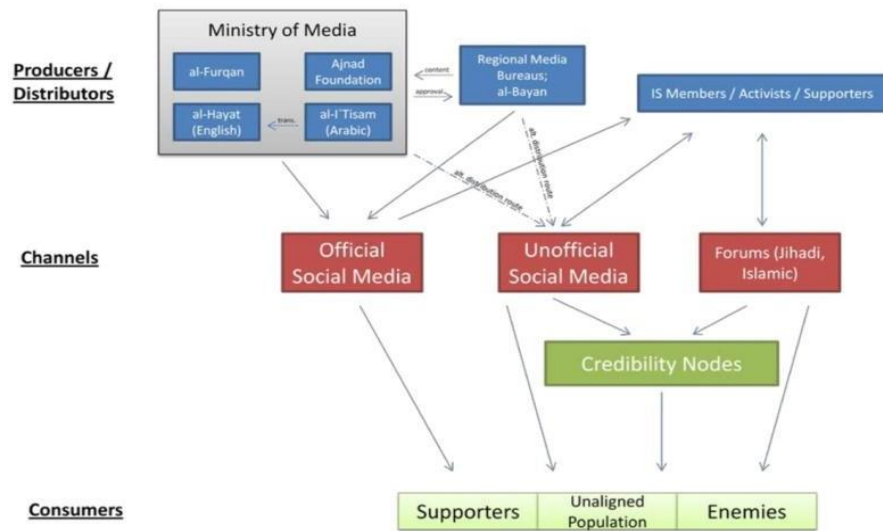


Figure 1: The media structure of Islamic State³⁴

The equipment of the organization made possible to step out from the shade of asymmetric warfare and start to use conventional warfare, combined with guerrilla warfare. According to the Amnesty International's report, the organization has light and small arms as assault rifles and semi-automatic rifles. But there are heavy weapons such as artillery guns – for example 155mm M198 towed howitzer –, portable air defense systems, and armored fighting vehicles – T-55 and T-62 fighting

³³ INGRAM, Haroro J.: The strategic logic of Islamic State information operations, In: Australian Journal of International Affairs, 2015. 69. vol. no. 6., pp. 735-736.

³⁴ Source:AL-'UBAYDI, Muhammad – LAHOUD, Nelly – MILTON, Daniel – PRICE, Bryan: The group that calls itself a State: Understanding the Evolution and Challenges of the Islamic State, <https://ctc.usma.edu/app/uploads/2014/12/CTC-The-Group-That-Calls-Itself-A-State-December20141.pdf>, p. 49. (accessed: 2018.3.11.)

vehicle, later M1AM1 “Abrams”, but they were destroyed.³⁵ (However, for example the Hamas already used RPG-29 anti-tank missile, SA-7 and HN-5 anti-aircraft missile, and 122mm “Grad” rockets after 2006, so the militaries – the US or the Iraqi Armed Forces – should have already known that they cannot let the Islamic State to obtain these tools.)³⁶ All these pieces of military equipment were captured from military camps and air bases. By this, I can assume that the guerrilla warfare was successful, the terrorists efficiently attacked military forces, military bases, and used one of the golden rules of Che Guevara – the main source of armament should be your enemy.

The territorial loss – Mosul, Aleppo, Raqqa, Tikrit, etc... – puts the ISIL in a situation, where it needs to choose. In 30 January 2018, Donald Trump announced that the Islamic State lost almost 98% of its territory.³⁷ As Péter Wágner said, the organization needs to choose between terrorism and guerrilla warfare. If they choose the terrorism, then they return to the basic conception, and enhance the number and brutality of their attacks.³⁸ On the other hand, if they choose the guerrilla warfare, the whole organization will end slowly; however as an ideology or what Marc Sageman calls leaderless jihad is going to be present, just as the ideology of al-Qaeda. This is also proven by the audio message of Abu Muhammad al-Adnani’s speech made in 21 May 2016. During a 31-minute long speech, he referred to the people’s will and desire to fight.³⁹

Terrorist methods used by Islamic State

As a terrorist organization, it uses the Islam as a tool for recruiting new fighters and to legitimize their action. Jason Fritz says most of the academic works focus on the Sunni (foreign) fighters, who return home to fight in their origin country on the side of Islamic State or Jabhat al Nusra.⁴⁰ However, the Islamic State can be named also as a successor of the al-Qaeda. To be able to show the separation between the terrorist and guerrilla parts of Islamic State, I mainly examine the terrorist acts perpetrated by Islamic State in Europe. Other reason is that according to a formal al-Qaeda member, the Islamic State recruits foreign fighters especially to carry out

³⁵ Taking stock: The arming of Islamic State, <https://www.amnesty.org/download/Documents/MDE1428122015ENGLISH.PDF>; pp. 11-20. (accessed: 2018.03.10.)

³⁶ KIS-BENEDEK József: Az Izrael-Hamasz háború biztonságpolitikai és katonai összefüggései, In: Felderítő Szemle, 2009. 8. vol. no. 1., p.14.

³⁷ GREENBERG, Jon: Donald Trump: ISIS territory losses near 100 percent, <http://www.politifact.com/truth-o-meter/statements/2018/jan/30/donald-trump/trump-isis-territory-losses-near-100/> (accessed: 2018.04.04.)

³⁸ NYULAS Szabolcs: Rakka felszabadításával sem lesz vége az Iszlám Államnak – interjú Wágner Péterrel, <http://www.honvedelem.hu/cikk/64048> (accessed: 2017.10.06)

³⁹ KAMOLNICK, Paul: Abu Muhammad al-Adnani’s May 21, 2016 Speech, <http://smallwarsjournal.com/jrnl/art/abu-muhammad-al-adnani%E2%80%99s-may-21-2016-speech> (accessed: 2018.04.02.)

⁴⁰ FRITZ, Jason – YOUNG, Joseph K.: Transnational Volunteers: American foreign fighters combating the Islamic State, <https://www.tandfonline.com/doi/full/10.1080/09546553.2015.1096783>; p. 6. (accessed: 2018.03.02.)

terrorist attacks abroad, and also the Daesh was full of fighters and suicide bombers, who were willing to sacrifice themselves for a bigger cause.⁴¹

In May 2014, a lone gunman killed four people in Brussels, Belgium, which can be seen as an indicator for a wave of Islamic State attacks in Europe and western cities. On 13 November 2015, France suffered its latest series of terrorist attacks – some experts and politicians named this day as “Black Friday” or “France’s 9/11”. The al-Qaeda conducted the same type of attacks well-known as the Madrid train bombs in 2004, the attacks in London in 2007 and the Charlie Hebdo shooting. The difference between the 2 organizations is that the Islamic State is better equipped, has more resources, more human resupply, which is trained better and fights better than the al-Qaeda’s.⁴² However, the last attacks also indicate a new series of attack, and a lack of security in France and Europe. They proved once again the fact that the terrorism as a phenomenon is not occurred only in poor countries with deprived population.

In 2016, from all the jihadist terrorist attacks, only 6 can be linked to the Islamic State. Among these incidents, we can find the stabbing, as on 13 June, when a French police commander and his wife were stabbed to death, and a 3 year-old boy survived. In October, a 17-year old refugee boy tried to carry out an attack on a train. After the attacks, the Islamic State claimed responsibility for the incidents.

On the evening of 14 July, the ramming type attacks started in Europe, at this time in Nice, when a Tunisian man attacked the crowd by driving two kilometers through the people – caused 85 victims. (Islamic State claimed the responsibility as well, but the Europol had no information to link the organization and the attacker.) On 19 December, in Berlin, a truck was driven into the Christmas market in the city center. On 17 August 2017, the latest ramming attack occurred in Barcelona. The incident itself killed 14 and injured more than 100 people. After the incident, the attacker(s) started to stab randomly people, while escaping from the spot. On the way to Cambrils, the suspects brought an axe and a knife with themselves, which suggests that following the vehicle attack, they intended to stab people.⁴³

After the arrest of the main suspect of terrorist attacks in Paris in the 2015 November– which took 132 citizens’ life –, radical extremist carried out attacks in the subway and at the airport in Brussels on 22 March 2016. The attacks were made in the capital of the European Union and the symbol of the North Atlantic integration. The Maalbeek metro station is near to the European Commission’s location and the city gives home for the NATO’s headquarters, which is the guarantor of Europe’s security.⁴⁴ In August, in Charleroi, two police officers were attacked by machete. *“In June German police arrested three alleged IS members of Syrian nationality; on*

⁴¹ KIS-BENEDEK József: The Islamic State and the intelligence, In: Nemzetbiztonsági Szemle, 2015. 3. vol. special english edition, p. 42.

⁴² Ibid. p.42.

⁴³ The Barcelona terrorist attacks, In: Strategic Comments, 2017. 23. vol. no. 8., p. iii.

⁴⁴ KUREEV, Artem: Russia’s bitter experience could help EU tackle its terrorism challenge, http://www.russia-direct.org/opinion/russias-experience-could-help-eu-tackle-its-terrorism-challenges?utm_source=Russia+Direct+free+weekly+newsletters&utm_campaign=a2409f2d09-RD_Newsletter_mar_28_2016&utm_medium=email&utm_term=0_cd2cf54b82-a2409f2d09-78555229 (accessed: 2016.05.03.)

suspicion of plotting a terror attack in Germany. The three were caught separately in different cities. It was believed that the men had received orders from IS leadership to attack the city of Düsseldorf using suicide vests, explosives and rifles. The plan was allegedly for two men to blow themselves up in central Düsseldorf before other attackers would kill as many people as possible with firearms and explosives."⁴⁵

From the data of the EU Terrorism Situation and Trend Report (TE-SAT), the Islamic State in Europe uses mostly the easy and cheap forms of attacks. In the changing modus operandi, we can identify the ramming operations, person-borne improvised explosive devices (PBIED), and fire arms. The purpose of the ramming attacks is to drive – if possible large and heavy – vehicles into crowded areas frequented by foreigners. To steal a car or truck for a ramming attack, or to use a normal kitchen knife are not difficult tasks. These simple materials and methods used on daily bases give hard time to national security forces. For a terrorist, the ramming can be the easiest and fastest way to be 'successful' and get into the paradise, meanwhile it claims many civilian lives. But there is a change in the IED- production as well, the use of military components changed to easier home-made or improvised components to adapt to the circumstances of the European Union. The main changes can be found in the intensity of an attack. Because of the rising security force cooperation in the European Union, the modus operandi changed to low-explosives – there is still some attempt with high-explosives, but not on daily basis.⁴⁶ This could be seen in the case of Paris, Brussels and Alcanar. The terrorists used triperoxide to construct bombs. The material is a highly unstable and well known material among the Islamic State's cells.⁴⁷ On the other hand, the use of suicide terrorism is quite cheap and fast. It takes 10 days to 3-4 months to transform a casual citizen into a suicide terrorist – by using drugs, religion, and psychology during the suicide bomber's preparation. Europe faces a full-fledged war that sets new rules. *"The main peculiarity of recent extremist attacks is that terrorists do not present any agenda or requirements. They are just trying to deter the EU and cause its population to panic."*⁴⁸

Outside of Europe, the segregation between guerrilla and terrorism is more complicated – by the way, most of the terrorist attacks occur on these territories. In 2016, the country report labeled the organization as a terrorist one, and notes the used terrorist methods as modus operandi: captured military equipment (tanks, artillery, and mortars), armored vehicle-borne improvised explosive devices, and self-developed unmanned aerial drones. According to estimates from the UN Assistance Mission for Iraq, the acts of terrorism and violence killed more than 7,000 civilians and injured more than 12,000 in 2016 – as a reference in 2015, the acts of terrorism and

⁴⁵ European terrorism situation and trend report 2017, <https://www.europol.europa.eu/tesat/2017/> (accessed 2018.03.11.), pp.22-25.

⁴⁶ European terrorism situation and trend report 2016, https://www.europol.europa.eu/sites/default/files/documents/europol_tesat_2016.pdf (accessed 2018.03.11.), pp.12-14.

⁴⁷ The Barcelona terrorist attacks, In: Strategic Comments, 2017. 23. vol. no. 8., p.iii.

⁴⁸ KUREEV, Artem: Tragedy in Paris: Terrorist attack or a new type of war?, <http://www.russia-direct.org/opinion/tragedy-paris-terrorist-attack-or-new-type-war> (accessed: 2016.05.16.)

violence killed 7,500 civilians and injured 13,800.⁴⁹ Syria is listed as a State Sponsor of terrorism since 1979.⁵⁰

However, all these attacks are the consequences of a speech made by Abu Muhammad al-Adnani in May 21 2016 and the multi-language magazine Rumiya, which contained a series of articles under the title “Just Terror Tactics”. The magazine suggests the following tactical moves for jihadists and lone wolves:

- Hostage-taking: The aim of this tactic is to make carnage and terror by terrorists, until the local authorities kill them. As regards the hostage-taking process, there are many options for the perpetrators. For example when they are armed with firearms, they have to assault as many people as possible in a busy, enclosed or public place – “[...] *one should then proceed to slaughter as many of them as he possibly can [...]*.” To gain firearms, the magazine divides the US-UK-Europe parts, and gives advice in each geographic allocation.⁵¹
- Truck attacks – known as ramming. The chapter includes all the preferable vehicles and “the vehicles to avoid.” The magazine lists some preferable targets, such as markets, festivals, but at the end, it concludes: “*In general, one should consider any outdoor attraction that draws large crowds.*”⁵²
- Knife attacks.
- Arson attacks.

The Europol’s public reports on terrorist methods suggest that the central government of the IS gives free hand and autonomy in operations. The terrorism part can be concluded as follows: *The escalation of violence and the employment of massive attacks could represent a new phase in IS strategy in the EU. The intended randomness in target selection urges Member States to ‘expect the unexpected’. Unexpected events however are not by definition events that have never happened before. They could very well include repeats of earlier attacks. [...] IS is innovative in its selection of targets in the EU, but conservative in its choice of weapons. The long-time truism “real terrorists use bombs – crazies use weapons” proves no longer to be valid. The weapon of choice is the AK 47, which has iconic value as demonstrated on various logos of the organization and its affiliates. The AK 47 is easy to buy and can usually be acquired in the country where an attack is planned, or in a neighboring country from where they can be easily transported. In the future more use could be made of cyber-attacks targeting critical infrastructures and state security, hitting western countries where they are vulnerable. There is no evidence of IS or other religiously inspired terrorist groups aspiring to use CBRN⁵³ weaponry in*

⁴⁹ Country Reports on Terrorism 2016, <https://www.state.gov/documents/organization/272488.pdf>; p.179. (accessed: 2018.03.19.)

⁵⁰ Ibid. p.185.

⁵¹ Just terror tactics: part 4, In: Rumiya, 2016. no. 9., <https://qb5cc3pam3y2ad0tm1zxuhho-wpengine.netdna-ssl.com/wp-content/uploads/2017/05/Rumiya-9.pdf>; pp. 46-51. (accessed: 2018.03.11.)

⁵² Just terror tactics – part 2, In: Rumiya, 2016. no. 3., <https://azelin.files.wordpress.com/2016/11/rome-magazine-3.pdf>; p. 12. (accessed: 2018.03.11.),

⁵³ CBRN – chemical, biological, radiological, and nuclear

the EU.”⁵⁴ However, these facts are known for the security and police forces and even for the public. The CBRN weapons represented one of the biggest fears of the United States and officially led to the invasion of Iraq in 2003. There is no exact evidence of this type of weapons, although there is a chance that the IS somehow got them from the al-Qaeda or took them from one of the Iraqi or Syrian bases.

To sum up, the Islamic State was able to use both features – terrorism and guerrilla warfare. To decide whether the organization is a terrorist or a guerrilla one is very difficult to define, and it depends on the interest, as József Kis-Benedek for example writes: “[...] assess that this entity is a guerrilla organization seeking to be a state by using terrorist and criminal methods.”⁵⁵ In this case I share his view, but because of the feature of terrorism and the fact that Europe had only terrorist attacks, therefore most of the European countries see the Islamic State as a terrorist organization. There are many similarities between the al-Qaeda and the Islamic State. Daesh is more brutal, radical and ruthless than the al-Qaeda; on the other hand, this made the organization so attractive for foreign fighters. What makes the Islamic State a guerrilla organization and separates it for example from the al-Qaeda is that the Islamic State fights for territory and declared the Caliphate. On the other hand, the al-Qaeda or the Jabhat al Nusra fights only for a Sunni jihadist priority. This is proved by the fact that on 8 April 2013, Abu Bakr al-Baghdadi made a proclamation about the Jabhat al Nusra’s assimilation into the Islamic State, and later, al-Zawahiri declared that the al Nusra is an Affiliation of al-Qaeda in Syria, and has the aim at controlling only a territory, and not possessing it.⁵⁶

Comparison of the Mini-manual and the Islamic State

Carlos Marighella was born in El Salvador on 5 December 1911 in a middle-class family. In 1935, he participated in the communist uprising and was detained for one year for distributing communist literatures. He was arrested and imprisoned two more times – in 1936 and 1939 – every time he was tortured and humiliated. Between 1954 and 1955, he visited China to learn more about the Chinese Communist Revolution.⁵⁷ In 1967, Marighella visited Havana, Cuba and published *Some Questions about the Guerrillas in Brazil*, dedicated to the memory of Ernesto Rafael Guevara de la Serna. In 1968, he founded the National Liberation Action movement and started to promote the guerrilla warfare in Brazil. On 4 November 1969, he was shot during a police ambush by a police officer. In 1969, he wrote his book as a manual for urban guerrilla – named *Mini-manual of the Urban Guerrilla*. The book can be called as a mini-manual for urban terrorism as well, so in this chapter, I examine –

⁵⁴ Changes in modus operandi of Islamic State terrorist attacks, https://www.europol.europa.eu/sites/default/files/documents/changes_in_modus_operandi_of_is_in_terrorist_attacks.pdf; p. 7. (accessed: 2018.03.11.)

⁵⁵ KIS-BENEDEK József: Tendencies in the policy of the Islamic State, In: *Defence Review*, 2016. 144. vol. no. 1., p. 43.

⁵⁶ HAMMING, Tore Refslund: The al-Qaeda-Islamic State Rivalry: Competition Yes, but No competitive escalation, <https://www.tandfonline.com/doi/full/10.1080/09546553.2017.1342634>; p. 3. (accessed: 2017.12.10.)

⁵⁷ WILLIAMS, John W.: Carlos Marighella: The father of urban guerrilla warfare, In: *Studies in Conflict & Terrorism*, 2008. 12. vol. no. 1., pp. 2-3.

chapter by chapter, if there is relevant open-source information about the Daesh, Islamic State and its affiliates –; and whether there is concrete similarity with the work of Marighella.

Definition of the guerrilla – by Marighella: *“The urban guerrilla is a person who fights the military dictatorship with weapons, using unconventional methods. A revolutionary and an ardent patriot, he is a fighter for his country's liberation, a friend of the people and of freedom. The area in which the urban guerrilla operates is in the large Brazilian cities.”* He goes on and notes the following as well: *“The urban guerrilla is an implacable enemy of the regime, and systematically inflicts damage on the authorities and on the people who dominate the country and exercise power. The primary task of the urban guerrilla is to distract, to wear down, to demoralize the military regime and its repressive forces, and also to attack and destroy the wealth and property of the foreign managers and the Brazilian upper class.”*⁵⁸ The members of Islamic State can be defined as believers and fighters who commit radical actions in the name of Islam. They fought against the Assad-regime in Syria and for government’s power in Iraq to form a new and actual Islamic State, which officially was declared in 2014 as a Caliphate. Among the types of terrains, what Islamic State has or had, there are cities such as Sirte, or if the focus is on the core organizations, we can find them in Mosul, Aleppo or Baghdad, just to mention the bigger populated areas.

On the other hand, as Marighella goes on, he states that the guerrilla fights only against government forces, imperialists, and “big businesses”. As will be shown later, the fundamental and ultimate goals of the fight is to eliminate the head of state and to confiscate the belongings of the government and “rich” people – this includes bank robberies as well. However, Daesh attacks also the population – the main target is the Shiite population. The imperialists and “big businesses” are given as the United States and its companies, as well as its allies (“the West”); because the US invaded Iraq in 2003 (officially because Iraq had weapons of mass destruction, but unofficially due to the natural resources, such as oil and gas). But during the emerge of ISIL, the organization and its name often demoralized the local forces – military or police – even before they actually reached the cities as well as the local governments, so the official employees left everything behind, what Daesh was able to freely collect. This also refers to the fact that Marighella wrote that the urban guerrilla should get the resources from its enemy, because the guerrilla group faces the shortage of ammunition.⁵⁹

About the weapons of the guerrillas, Marighella mentions the light arms, to be more precise, the automatic and, or semi-automatic weapons; however the automatic weapon sometimes is – as he said – “an ammunition drain”, because of the lack of training. The 45-caliber submachine gun is one of the best friends of the guerrilla. However, the 32-caliber one is recommended as a weapon to practice, but the 38-caliber gun is the best for a person, who wants to efficiently practice and kill the enemy. The author mentions the bazookas, but the heavy artillery is out of use or not recommended, because it causes the guerrilla loss of its mobility and speed. From the

⁵⁸ MARIGHELLA, Carlos: *Mini-manual of the Urban Guerrilla*, Abraham Guillen Press, Montreal, 2002, p. 4.

⁵⁹ *Ibid.* pp. 5-7.

homemade weapons, the Molotov cocktails and basically anything which can detonate explosives, or can kill the target can and should be listed as useful arms.⁶⁰ In December 2017, the Conflict Armament Research group published its investigation's result about the weapons of the Islamic State in Iraq and Syria. According to this report, the organization has (or had) the AK-pattern assault rifle, which chambered for 7.62x39mm (43M) and rifles chambered for 5.56x45mm, mainly produced between 1960 and 1989 and after the 2000s – but the last listed type is very rare and cannot be found in big amounts in the organization.⁶¹

Under what Marighella called bazooka, Islamic State understood rockets, mainly 40mm – manufactured between 2014 and 2016, and 73mm – manufactured in 2016 or after – as well as RPG-7 and SPG-9 launchers, and some other calibers.⁶²

Chapters about “The shot” and “The Firing group” can be identified with the terrorist attacks in Europe. As the attacks in Brussels, Barcelona and Paris demonstrated what Marighella intended to describe: “[...]we *must know how to shoot well, because it is required by this type of combat [...] the urban guerrilla's life depends on shooting.*”⁶³ We have to work in small groups, which can and should be divided in active and sleeping cells. On 13 November 2015, the organization introduced its tactic via the Paris attacks, and indicated a turn to a bigger strategy. The attacks are mainly local and domestic terrorism, as the Te-Sat report says: “*Many EU Member States regard attacks carried out by radical Islamists who are lone actors or small groups to be a serious risk.*”⁶⁴ The cell structure is well-known since the 11 September 2001 attacks, which were carried out by the al-Qaeda and what was followed by a global fight against terrorism.

In perspective of logistics, Marighella used the abbreviation or formula of MMWAE – mechanization, money, weapons, ammunition, explosives. For mechanization, he assumed the machinegun as well as its operator and drivers. The rest of the logistic parts should be gathered as soon as and as much as possible – there is no enough or right amount, there is only a minimum amount to start, but there is no maximum amount. (At this point, he speaks about the main problems of having enough materials as well. The hiding place for guerillas or materials or weapons, the transportation and the place to assemble the materials are listed as problems what the guerrilla should calculate with.) The whole preparation should be accomplished without alerting the enemy. The possession of terrain and local recruits who know well the operational area can efficiently help the organization to avoid being caught.⁶⁵ The Islamic State of Iraq and Syria could complete these tasks because of the geographical characteristic of the region. The organization's connection with local

⁶⁰ Ibid. pp. 8-10.

⁶¹ Weapons of the Islamic State, http://www.conflictarm.com/download-file/?report_id=2568&file_id=2574 (accessed: 2018.03.22.), pp. 13-14.

⁶² Ibid. pp. 26-28.

⁶³ MARIGHELLA, Carlos: Mini-manual of the Urban Guerrilla, Abraham Guillen Press, Montreal, 2002, pp. 10-12.

⁶⁴ European terrorism situation and trend report 2016, https://www.europol.europa.eu/sites/default/files/documents/europol_tesat_2016.pdf; p. 7. (accessed: 2018.03.11.)

⁶⁵ MARIGHELLA, Carlos: Mini-manual of the Urban Guerrilla, Abraham Guillen Press, Montreal, 2002, pp. 12-13.

society offers the chance to create a self-sustaining financial model, including bank looting, international donations, taxes, natural resources (oil, gas and water), as well as to pursue smuggling. The Caliphate, in order to recruit and control its important territories and bases, used the water to support its warfare. Between 2014 and 2016, the control over Euphrates Basin in Syria and the northern stretch of the Tigris gave the Caliphate the chance to impose taxes and gain income from water and offer services to local population.⁶⁶

As regards the tactics, I think that the traditional procedures of terrorism were listed in the mini-manual. New element of terrorist procedures is the use of IED, SVBIED, VBIED, and SVEST. However, the new procedures, the use of IEDs and suicide vests can be connected with Marighella's concept, when he said that *"the enemy remains ignorant of all the information"*⁶⁷ and about the plan and the attack until it happens. An excellent example of this is the attack in France in March 2018. According to the Paris prosecutor, the perpetrator was known for the law enforcement since 2014⁶⁸ Despite this fact, the terrorist could freely commit his attempt.

The importance of the knowledge about the terrain and the enemy, as well as the speed and mobility are mentioned in the Mini-manual. All this can be also applied to the concept followed by the ISIL. Since 2004, the organization was present as al-Qaeda in Iraq. In 2009, the group in its new name as Islamic State in Iraq made targeted attacks, because the Iraqi prime minister started to target Sunni leaders, such as the vice president, by which the tribal areas started to support their case as well. As a result, the first big cities, such as Ramadi or Fallujah had been taken over by ISIS.⁶⁹ The mobility and speed are guaranteed by VBIEDs, mounted on fast, modified and tuned vehicles and by the well-known Toyota pick-up trucks and SUVs.⁷⁰ These capabilities gave the chance to control cities via easily modified heavy duty trucks and through the ex-military persons ISIL could recruit from the Iraqi Defense Forces, who have the knowledge of how to fight and win against enemy forces.

To obtain information and use it against the security and police forces, a reliable intelligence service is needed. Based on the obtained information, the decisiveness and the duty of the commander can be a key question. As Marighella says: *"...an action successfully begun can end in defeat if command of the situation and the capacity for decision falter in the middle of the execution of the plan. When this command of the situation and a capacity for decision are absent, the void is filled with hesitation and terror. The enemy takes advantage of this failure and is able to*

⁶⁶ BECCARO, Andrea: Modern Irregular Warfare: The ISIS case study, In: Small wars & Insurgencies, 2018. 29. vol. no. 2., pp. 210-211.

⁶⁷ MARIGHELLA, Carlos: Mini-manual of the Urban Guerrilla, Abraham Guillen Press, Montreal, 2002, p. 14.

⁶⁸ BREEDEN, Aurelien: French police officer wounded in hostage standoff dies, <https://www.nytimes.com/2018/03/23/world/europe/france-trebes-attack.html> (accessed: 2018.03.28.)

⁶⁹ The rise and fall of ISIS: from inevitability to inevitability, <https://hcss.nl/sites/default/files/files/reports/The%20Rise%20and%20Fall%20of%20ISIS.pdf>; p. 7. (accessed: 2018.03.22.)

⁷⁰ The spread of the caliphate: The Islamic State (Part 1), <https://www.youtube.com/watch?v=bsCZzpmBEcs> (accessed: 2018.03.29.)

liquidate us.”⁷¹ Because of this, the organization and the whole Islamic State have a command chain and a central government. There are four councils – Sharia, Shura, Military, and Security Councils to support and provide basic services, to expand the movement to regional (wilayats) and local areas (quitabaat). The Caliph should be chosen by the Sharia Council and approved by the Shura Council – these two institutions provide legitimacy for the Caliph and the Caliphate as well. The Shura Council represents the consent of the population and has a consultative role to the Caliph. The Sharia Council can be described as the supreme judiciary of Islamic State and responsible for the public morality and the “Islamic Police”.⁷²

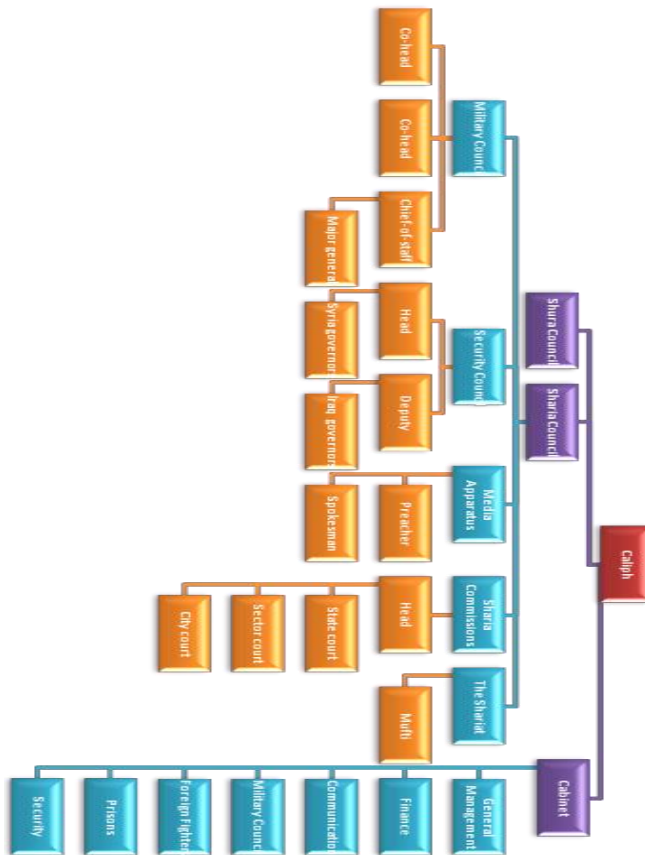


Figure 2: The Islamic State leadership structure⁷³

⁷¹ MARIGHELLA, Carlos: Mini-manual of the Urban Guerrilla, Abraham Guillen Press, Montreal, 2002, pp. 17-18.

⁷² SALAM, Basma: The resilience of the Islamic State, http://www.bundesheer.at/pdf_pool/publikationen/resilience_of_islamic_state_b_salama.pdf; pp. 28-29. (accessed: 22.03.2018.)

⁷³ Source: MEZZORIORE, Gianluca: Isis leadership: who's who in 'fluid' Islamic state structure of power, <https://www.ibtimes.co.uk/isis-leadership-whos-who-fluid-islamic-state-structure-power-1509014> (accessed: 02.04.2018.) - edited by Márk Károly Kovács

The al-Qaeda and Osama bin Laden regrouped and reorganized the terrorist group into a cell type organization, with the idea of a future “leaderless jihad”. This means that one cell should know as much as it needs to know and even if the national security forces disconnect one cell, the organization can work further without any complications. In case of Islamic State, this can be confirmed as well. As being shown above, there are 2 or more people working together, so – for example – if one of the cabinet members is dead, the others can lead the sections under the cabinet. In case of the Caliph or the leader can be said the same.⁷⁴

The objectives of the guerrilla’s action are to attack the economic and industrial centers of the country, to weaken and divide the military and police forces. *“Meanwhile, the government with all of its problems, incapable of halting guerrilla actions within the cities, will lose time and suffer endless attrition, and will finally be forced to pull back its repressive forces in order to mount guard over all the official buildings such as banks, ports, airports, etc.”*⁷⁵ As the forces divided, the intensity of the attack should be increased as well. To prevent the failure, the urban guerrilla should employ rapid and brief attacks and use the help of the rural guerrilla as well, to be able to succeed at the end, as a member of the revolutionary army fighting for national liberation.⁷⁶ Islamic State took advantage of the political upheaval in Turkey in 2014, which made it possible for IS to create a network to support the operations in Syria and Iraq. Oil – produced in Syria and Iraq – was sold and transferred to Turkey, which was verified by the personal e-mails of Turkish Oil Minister in 2016. The open-boarder policy of Turkey offered a good occasion for terrorists to attack the Istanbul Atatürk Airport and the Reina nightclub. The attacker of Reina admitted that the operation was controlled by the emir of Raqqa. In February 2017, Islamic State of Iraq and Levant ordered the cells in Turkey to cause incidents and to carry out attacks against military, police, tourists, and religious places. Thus, the number of operations would divide the forces of Turkey, which also lost almost 150,000 government officials, because of the coup attempt in July 2016 – including 30,000 officers in the section of police chiefs and counter terrorist specialists.⁷⁷ In case of Syria and Iraq, the terrorist attacks were limited, thanks to the international anti-Islamic State coalition and its airstrikes – only the United State by itself deployed 5,500 soldiers in the region and conducted over 14,000 airstrikes until January 2017. To be able to do the force stretching on local – Syria and Iraq – level, the organization would need to strengthen its capability, as well as the training and practice of their fighters.⁷⁸

Marighella’s 14 types of missions⁷⁹ and the way how they can be carried are different in the case of Daesh. At the beginning, the organization started as a terrorist one and relied mainly on ethnical, national and religious feelings. After gaining

⁷⁴ KIS-BENEDEK József: Tendencies in the policy of the Islamic State, In: Defence Review, 2016. 144. vol. no. 1., p. 3.

⁷⁵ MARIGHELLA, Carlos: Mini-manual of the Urban Guerrilla, Abraham Guillen Press, Montreal, 2002, p. 20.

⁷⁶ Ibid. pp. 19-20.

⁷⁷ YAYLA, Ahmet S.: ISIS in Turkey, In: Per Concordiam, 2017. 8. vol. no. 2., pp. 54-55.

⁷⁸ DAVIS, Carmel: Limits to the islamic State, In: Orbis, 2017. 61. vol. no. 2., p. 190.

⁷⁹ assaults; raids and penetrations; occupations; ambushes; street tactics; strikes and work stoppages; desertions, diversions, seizures, expropriation of weapons, ammunitions and explosives; liberation of prisoners; execution; kidnapping; sabotage; terrorism; armed propaganda; war of nerves

strength and equipment, it changed to conventional and guerrilla warfare in general and terrorism is used only as a tactic. There was no need to use the steps of Marighella, such as the use of cover, retreat or rescue the wounded.⁸⁰ The security measures taken in urban guerrilla fight (described in the Mini-manual) are also different, because the list on security measures was made for guerrillas on the way to a successful revolution and in the era of 1970', but it is not interpretable in the case of Islamic State. The key, favorable elements for Islamic State during city occupations were that the Iraqi security forces suffered from inside problems, such as corruption, political command and structural difficulties. They became rather weak, thus the Islamic State was able to occupy for example Fallujah in 2014.⁸¹ There was no need for it to consider the intentions of Marighella.

The purpose of a sin list is that anyone can make such error(s) that can fail the mission of the guerrillas. The chapter is under the same category as the way how to carry out operations. On the other hand, to gain the support of the population is one of the main tasks, what Islamic State of Iraq and the Levant and the Islamic State in general have taken very seriously. As it could be seen before, a whole media system was created and natural resources were occupied to gain more and more support. Marighella emphasizes the empathy of the guerrillas with the public – for example – regarding the population's grievances, due to corruptions or the rule of foreign industry monopolies. The best way to reach the goal is to intervene in political questions, as the government has no alternative, except to intensify its response and repressions – its police and political terror. In this case, the repressive police system fails and the military and security forces take over the power, but they are not able to stop the guerrilla movement. The result is that the central power is not capable to solve its problems, the population refuses the collaboration and the political system transforms into a military one. The public – as a reaction – starts to beg for an election to reestablish democracy. The government is going to try to solve the problems, but the role of the guerrillas is to convince the public that it cannot trust in the government, and have to maintain the chaotic situation. This situation gives the chance for the guerrillas to extend their urban warfare to rural areas as well. All in all, the fact that the urban combat for the people and their cause make it possible for the guerrillas to keep up the fight's intensity and to gain new recruits all the time, the revolution becomes a self-supporting one and does not end until it reaches its goals.⁸² Islamic State and Daesh declared its establishment back in 2006 with Sunni identity, and headed by Abu Omar al-Baghdadi killed in 2011, together with his Minister of War Abu Hazma al-Muhajir. However, after 2007, when the first governmental formation was declared, the new organization was suffering from the lack of appropriate popular support and the creation of the Sahwat – awakening Sunni supported forces, as a rebellion against the Islamic State of Iraq. Under a new leadership, the organization – during its underground years – reestablished itself with new bureaucratic structure and propaganda mechanism. On 16 May 2010, the new emir of the Islamic State of Iraq and Syria was Abu Bakr al-Baghdadi. The lost support of Sunni tribes started to rise again, because of the Iranian and Shiite domination – for example the Iraqi Prime Minister Nuri al-Maliki had Iranian influence. After the official withdrawal of the US

⁸⁰ MARIGHELLA, Carlos: Mini-manual of the Urban Guerrilla, Abraham Guillen Press, Montreal, 2002, pp. 32-35.

⁸¹ DAVIS, Carmel: Limits to the Islamic State, In: Orbis, 2017. 61. vol. no. 2., pp.189-190.

⁸² MARIGHELLA, Carlos: Mini-manual of the Urban Guerrilla, Abraham Guillen Press, Montreal, 2002, pp. 35-37.

troops on 31 December 2011, the Iranian and Shiite influence in Iraq became stronger and stronger. In 2011, the Arab Spring started and the Syrian regime of Bashar al-Assad broke down a peaceful protest, therefore Syria escalated into a militant conflict, which in a short time, became one of the largest hubs of jihadists.⁸³ All in all, the events happened in favor of the Islamic State and there was no need to gain the support of the population, because Iran and the regime did it for the IS. There is the constant Sunni-Shiite conflict as well, which can be considered as a magnet attracting jihadists.

Conclusion

According to the chart of János Béres and to the Mini-manual of urban guerrilla warfare, Daesh has more guerrilla features than terrorist ones. I need to highlight the fact that I have already mentioned before; there is no clear line between guerrilla, insurgent and terrorist – only in the law. So it is practically a subjective decision – for example – whether the use of VBEID can fit in the profile of terrorist or guerrilla warfare. However, it is important to decide what we are fighting against. If it is basically against an ideology – e.g. in the case of a terrorist organization – then it is a never-ending battle, such as against the al-Qaeda. If we struggle against a guerrilla, insurgent movement, then there are tools and field manuals which describe how to handle the problem – except in the case of the Islamic State, in which the religion (the Islam) has an important role.

Because of the religion, Islamic State has become a radical Islamist organization. In this sense, it is more than “just a guerrilla organization”. After the United States’ presence and the creation of anti-ISIS coalition, Russia also appeared, and Iran was already in the area. Against this three-side force, the Islamic State has no chance in the aspect of the territory of Iraq and Syria. On the other hand, because of the religion, there will always be human resources against the Shiite “invaders” – Iran. The Daesh lost almost all of its territories, and during its fight for preserving its territories, it used up everything at its disposal. The guerrilla warfare and terrorism mixed than never before during the life of the Islamic State of Iraq and the Levant.

Speaking about the future of the area, at least 3 main terrorist organizations can be identified – Jabhat al Nusra, al-Qaeda in the Islamic Maghreb (AQIM) and Hamas – as successors, after Daesh ceases. On 28 March 2018, the AQIM published a warning criticism on terrorist groups in Syria. Furthermore, there are Iran and Russia as well, which “applied for a greater influence” in Syria and Iraq if the United States withdraws from the territory. (The question of the Kurds is an open issue, but it is almost certain that they are not going to get any territory for their fight.)

⁸³ RUMAN, Mohammad Abu – HANEIH, Hassan Abu: Infatuated with Martyrdom: Female jihadism from al-Qaeda to the 'Islamic State', Friedrich-Erbert-Stiftung Jordan&Iraq, Jordan, 2017, pp. 113-116.

Islamic State as	Guerrilla, insurgency group	Terrorist group
The goal	- to overthrow the governments of Iraq and Syria - to establish the Caliphate - to expand the Caliphate's territory.	- to recruit new fighters - to legitimate its actions
Methods	- IED - SVBIED - VBIED - SVEST	- ramming - stabbing - arson attack - hostage-taking
Targets	- military facilities - persons in connection of the military - the police.	- innocent civilians
Supporters	Sunni population	sympathizers

*Table 3: Comparison of the Islamic State as a guerrilla, insurgent and terrorist organization
/edited by Márk Károly Kovács/*

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TIBOR SZILVÁGYI

THE EU'S CHANGING DEFENCE CAPABILITIES AFTER BREXIT

Abstract



The author is almost certain that nearly every adult person in Europe has been informed about the fact that on 23 June 2016 the majority of British voters were in favour of giving up the membership inside the now 28-member European Union (EU)¹. The voters' decision was most likely influenced by the illegal migration and the missing consensus among EU members concerning a common migration policy. As a consequence of this referendum, the United Kingdom (UK, see on the map²) will leave the European Union on 29 March 2019. After this date, a 21-month transition period will come that ends with a final goodbye ceremony. The so called BREXIT is knocking on the door that surely will have its impact on the Union's future political, economic and defence capabilities as well. With this unexpected and surprising decision, the EU will lose 5.56% of its geographical territory³ and nearly 13% of its population⁴. For many political analysts, it has been a strange phenomenon that the EU administration had easily accepted the Brits' will – from the very beginning of the BREXIT story – and none of the member states wanted to delay this process.

¹ Leave won by 51.9% to 48.1%. The referendum turnout was 71.8%, with more than 30 million people voting. Alex Hunt and Brian Wheeler: Brexit: All you need to know about the UK leaving the EU, News 26 March 2018, <http://www.bbc.com/news/uk-politics-32810887>, 09 April, 2018

² The map of UK from the CIA World Factbook, <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/uk.html>, 11 April, 2018

³ Surface area of the EU is 4 463 600 km² and of the UK is 248 500 km². European Union – Living in the EU – Size and population, https://europa.eu/european-union/about-eu/figures/living_en#size, 09 April, 2018

⁴ Population on the 1st of January 2017 in the EU was 511,805.1 Mio and in the UK 65,808.6 Mio. http://ec.europa.eu/eurostat/statistics-explained/images/6/6d/Demographic_balance%2C_2016_%28thousands%29.png and <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00005&plugin=1>, 09 April, 2018

But to tell the truth, this behaviour is understandable, it is called democracy that includes the acceptance of others' will. Now, there is no way going back, although since the famous referendum, a plenty of Brits have allegedly regretted their decision. Is this loss crucial or is it a piece of cake for the remainders? This publication is going to give an analysis about the BREXIT's consequences concerning the defence and security capabilities inside the EU.

Keywords: UK's future role in NATO and Europe, its military strength and nuclear capability, its security and defense policy, its weapons, its role in international missions.

The EU's security and defence policy

The 2003 (approved in 1999) and the 2010 (approved in 2004) Helsinki Headline Goals describe in detail how EU defence capabilities should look like. According to the documents, the EU should have been able to deploy self-sustained forces up to Corps level (15 Brigades or 50,000–60,000 troops) and related supports (intelligence, logistics etc.) within 60 days from the beginning of a crisis. Forces might face five declared scenarios (separations of parties by force; stabilisation, reconstruction and military advice to third countries; conflict prevention; evacuation operations; and assistance to humanitarian operations). The strategic objectives and the reality show a huge capability gap concerning the carrier based air power, early warning, Intelligence-Surveillance-Reconnaissance (ISR), Unmanned Aerial Vehicles (UAV), airlift and strategic transport. It can be stated that not too much steps forward have been made during the last couple of years in this field. Unfortunately, the joint development programmes are driven rather by national interests than by common values. In addition, tools such as Battlegroups (the supposed EU Rapid Reaction Forces), although fully operational, are not completely utilised. It proves that an effective defence co-operation among member states does not exist.⁵

The European Defence Agency's (EDA) four-capability programmes have been developed in order to increase the following military and defence capabilities and to decrease their arrears:

- Air-to-Air Refuelling(AAR);
- The Remotely Piloted Aircraft Systems (RPAS) integration, harmonisation and development;
- The Governmental Satellite Communication;
- Cyber defence training, technology and protection.

All of them are suffering from the interoperability insufficiency, so EDA tries to fill in this gap with other programmes.

The EU Parliament as well supports the member states' closer collaboration in its report on the opportunities the Lisbon Treaty offers for defence co-operation (March 2017). According to this document duplication, overcapacity and barriers to defence procurement usually cause 26.4 billion EUR damage every year. The desired

⁵ Giulia TILENNI: EU Defence Capabilities, European Security and Defence, 4/2017, ISSN 1617-7983, p 14.

European Armed Forces are not such coherent as the United States' (US') Forces are, since EU countries are able to deploy only 4-5% of their overall manpower (60-100,000 servicemen out of about 2 million), half of which are British and French. The unequal and inefficient defence spending, its bad allocations, as well as the high diversity of weapon systems cause significant damages. EU authorities believe that a better co-operation among the member states could contribute to a more efficient European defence power and capability. Unfortunately, instead of "pooling and sharing" to solve the huge capability gaps, member states are amplifying them by their national defence priorities.⁶

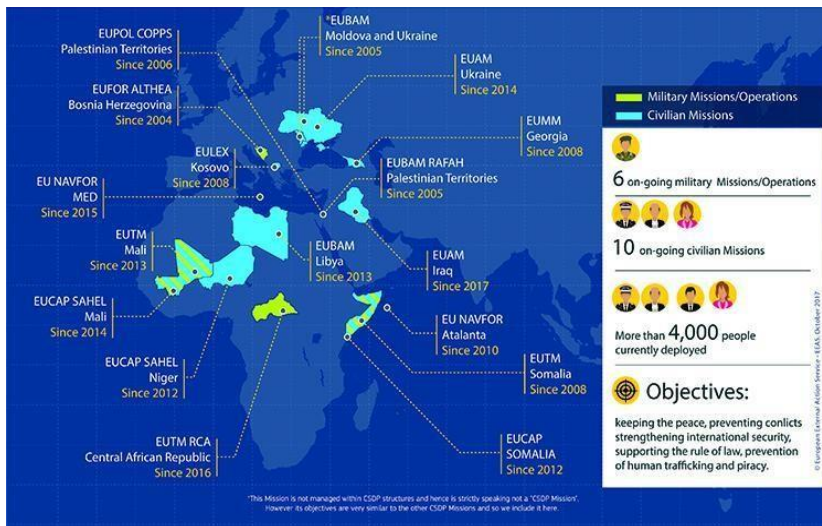


Figure 1: Overview of the current EU missions and operations⁷

For the time being, most EU missions are civilian or non-military. At the moment, the EU is on the way for building its wide range military capability. In order to reach this objective, the Alliance has established 19 rapid deployment Battlegroups, consisting of two to six countries each. However, without the support of the United States, the EU is not able to undertake a military operation against a state (for example Libya) or a non-state actor (e.g. the Islamic State). While the EU is not ready to fight a traditional war, the Union is more suitable for engaging in crisis management, upholding and supporting unmandates, assisting Special Forces' operations, coping with cyber security challenges and conducting military, civilian and police training for recovering nations.⁸

According to the 2016 EU Global Strategy, the Alliance should enhance its external role and its ability to quickly respond to an international crisis situation by

⁶ Ibid. pp. 14-15.

⁷ Source: EU External Action, Military and civilian missions and operations, https://eeas.europa.eu/headquarters/headquarters-homepage/430/military-and-civilian-missions-and-operations_en

⁸ Dr. DINOS Anthony Kerigan-Kyrou: The EU and NATO – Promoting Collaboration Between Two of The World's Most Powerful Organizations, *Concordiam – Journal of European Security and Defense Issues*, Volume 6, Issue 3, 2015, pp. 18-19.

2020-2025. However it has little chance in such a short period. The 28 states, despite their more than 2 million soldiers and thousands of weapon systems of hundreds types, declare that they are unable to provide the EU with two deployable Battlegroups (about 3,000 soldiers with relevant assets) per semester. Among others, the political willingness is missing for the implementation of these ambitious objectives, too. Since the lack of credible military capability, the EU probably will remain a leg behind actor in the international security scene. The current EU decision-making trends do not eliminate this negative effect either.⁹

EU's would-be Rapid Response Forces are underused or almost empty when it comes to leveraging on military power. In perspective, the creation of the unified EU Armed Forces is not compatible with today's decision-making trends. In order to gain a certain strategic independence from NATO and the US, the work should start from gap fillers. Member states might specialise in different niche capabilities to be put together in case of a need, instead of insisting on full-spectrum capabilities they cannot afford. "Pooling and sharing" policy is more feasible than building a wide-range individual military capability. Common Security and Defence Policy (CSDP) should be a trigger of this trend that can lead to a better EU defence capacity and capability in the longer term.¹⁰

The UK's role inside the EU's defence expenditure and military institutions

Thanks to its developed status and prosperous economy UK is a net contributor to the EU. It means that the country pays more money for the EU administration than it receives from the Alliance. In 2016, the UK government paid 13.1 billion Pounds into the EU budget, and EU spending on the UK was approximately 4.5 billion Pounds. So the UK's "net contribution" was estimated at about 8.6 billion Pounds. Each year, the UK gets a discount on its contributions to the EU – the so called "rebate" – worth almost 4 billion Pounds in 2016. Without it, the UK would have been liable for 17 billion Pounds in contributions.¹¹ UK is one of the nine net contributor nations to the EU budget that puts in more money than takes it out.

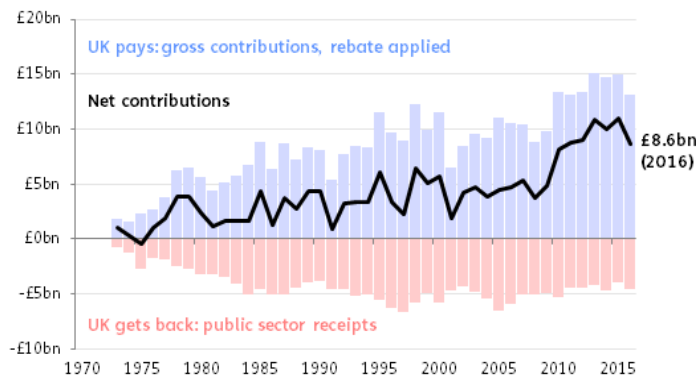
⁹ Giulia TILENNI: EU Defence Capabilities, p. 16.

¹⁰ Ibid., p. 16.

¹¹ The UK's EU membership fee, <https://fullfact.org/europe/our-eu-membership-fee-55-million/>, 11 April, 2018

UK payments to EU budget

Balance of UK contributions to and public sector receipts from the EU budget, inflation-adjusted in 2016 prices, calendar years



Source: HM Treasury European Union Finances 2016, House of Commons Library analysis and HM Treasury GDP deflators (September 2017)

Figure 2¹²

The Defence Modernisation Programme¹³ is on the way, aimed at making development until the summer 2018, since there was a need for more personnel and equipment to meet identified threats. In 2018, the MoD budget will be 36 billion Pounds (41.678 billion EUR), again about 2% of the GDP. Despite the rise by 1 billion annually, the Ministry of Defence sees this increase as insufficient. Meanwhile governmental actors think that extra money could come through increased efficiency. Terrorism and cyber security has been identified by the Ministry of Defence as key threats the UK should face and this is not surprising at all.¹⁴

UK is one of the EU member states, which spend at least 2% of their GDP for defence purposes (UK's was 38.724 billion Pounds in 2016).¹³ (Without confusing the EU and NATO-obligations, we have to mention that NATO expects all its member states to spend at least 2% of their GDP for defence purposes.)¹⁵ (Without confusing the EU and NATO-obligations, we have to mention that NATO expects all its member states to spend at least 2% of their GDP for defence purposes.)

¹² Source: The UK's EU membership fee, <https://fullfact.org/europe/our-eu-membership-fee-55-million>

¹³ UK Defence Secretary Gavin Williamson announced on the 25 January 2018 that the defence element of the National Security Capability Review (NSCR) will be subject to a further review, and is due to be completed by the summer. Prof. Malcolm Chalmers: The UK Defence Modernisation Programme: A Risk and an Opportunity, <https://rusi.org/commentary/uk-defence-modernisation-programme-risk-and-opportunity>, 16 April, 2018

¹⁴ Ewen MacAskill: MoD to launch defence review that will be completed by summer, 25 Jan 2018, The Guardian, <https://www.theguardian.com/politics/2018/jan/25/mod-launch-uk-defence-review-gavin-williamson>, 11 April 2018

¹⁵ Government expenditure on defence, http://ec.europa.eu/eurostat/statistics-explained/index.php/Government_expenditure_on_defence, 12 April 2018

In absolute terms, the United Kingdom spent by far the highest amount on defence (55 billion EUR) in 2015.

That time the UK's defence expenditure made about 27% of the EU states' defence budgets sum. It was followed by France (38 billion EUR, or 19% of the EU total), Germany (30 billion EUR, or 15%) and Italy (20 billion EUR, or 10%). Together, these four member states accounted for 72% of the total defence expenditure in the EU.¹⁶

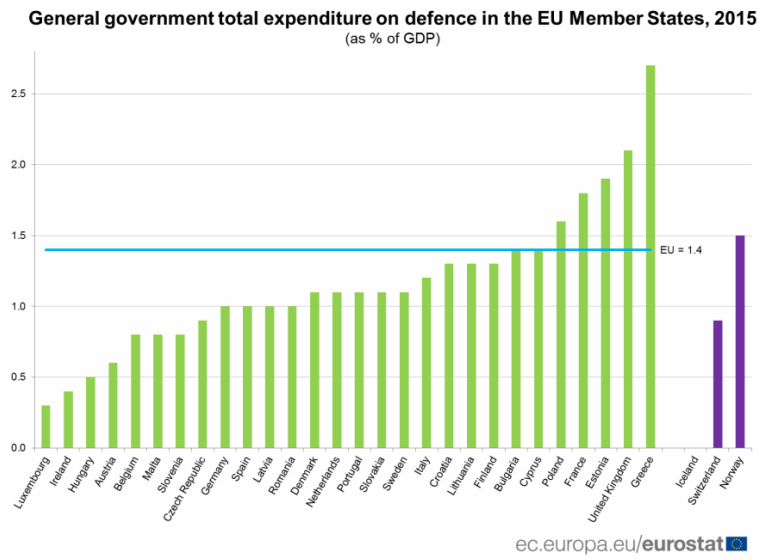


Figure 3¹⁷

The UK's huge contribution to EU's defence and security definitely will be missing from the EU's visibly shrinking defence capability. The country's three services (British Army, Royal Air Force and Royal Navy) represent a significant military power that is relatively modern, well equipped and worldwide active. They constitute a motivation and good example for others.

The European Union Military Committee (EUMC) is the highest military body. The European Union Military Staff (EUMS) works under the direction of the EU Military Committee (EUMC) and under the authority of the High Representative/Vice President (HR/VP). The EUMS coordinates the military instrument, with particular focus on operations/missions (both military and those requiring military support) and the creation of military capability.¹⁸

¹⁶ Eurostat – How much is spent on defence in the EU? <http://ec.europa.eu/eurostat/web/products-eurostat-news/-/EDN-20170607-1,12April2018>

¹⁷ Source: Eurostat – How much is spent on defence in the EU? <http://ec.europa.eu/eurostat/web/products-eurostat-news/-/EDN-20170607-1>

¹⁸ CSDP structure, instruments and agencies, https://eeas.europa.eu/topics/common-security-and-defence-policy-csdp/5392/csdp-structure-instruments-and-agencies_en, 5 May, 2018

In addition to providing strategic advice to the High Representative, the EUMS reports to the EUMC. The Deputy Director General is Rear Admiral Bruce Williams from the UK. In order to conduct an EU military crisis management operation, an Operational Headquarters (OHQ) is nominated, which directs the Force Headquarters (FHQ). If an EU operation is planned and conducted with recourse to NATO assets and capabilities, the OHQ is automatically the NATO HQ Allied Command Operations (ACO). In other cases, five national operational headquarters (two in France and one in Germany, in Italy and in the UK) have been made available for the use by the Union to fulfil the OHQ role. The British Permanent Joint Headquarters at the Northwood Headquarters is located northwest of London.¹⁹ A number of British high-ranking officers are representing the EU's common interest in the EUMS and HQs that after the BREXIT should be fulfilled by other nations' representatives.

Military strength of the UK

The off-the-shelf British Armed Forces have about 400 tanks, 1200 aircrafts, and are about 230,000 personnel strong (including reserves). Historically, the UK has excelled in areas such as maritime strike, anti-submarine warfare, air defence, and airlift, as well as intervention through special operations or amphibious and airborne rapid reaction forces. The current reforms could include a reduction in land forces (from 82,000 to 70,000) and in heavy equipment such as tanks and armoured vehicles; retirement of the RAF's ageing fleet of Tornado strike aircraft; dropping the number of expensive ASTUTE-class nuclear submarines; and combining the royal marines and parachute regiment, as well as the special forces.²⁰

The UK unambiguously represents an important part of the whole defence capability inside the European Union. The British Army comprises of 112,000 experienced, engaged and highly skilled regular and reserve soldiers. Their international commitment and support are shown by the fact that in 2017, as many as 43,390 British soldiers were deployed in over 40 countries across the world.¹⁸ The 3rd Division is the UK's strategic land warfare asset. It is comprised of over 27,000 soldiers and 3500 vehicles.²¹ The 3rd Division is the UK's strategic land warfare asset. It is comprised of over 27,000 soldiers and 3500 vehicles.²²

The British Army is actively engaged in operational duties across the globe. The work they do ranges from peacekeeping to providing humanitarian aid, from enforcing anti-terrorism measures to helping combat the international drugs trade in several countries. The largest numbers of UK's expeditionary forces are in Africa.²³

¹⁹ European Union Military Staff (EUMS), https://ipfs.io/ipfs/QmXoypizjW3WknFiJnKLwHCnL72vedxjQkDDP1mXW06uco/wiki/European_Union_Military_Staff.html, 5 May, 2018

²⁰ Ian J KEDDIE: How the UK armed forces would look if you started from scratch, <https://www.theguardian.com/commentisfree/2018/jan/29/how-uk-armed-forces-look-scratch-military-spending-army-navy-airforce>, 11 April, 2018

²¹ The British Army – Our serving troops, <https://www.army.mod.uk/>, 16 April, 2018

²² The British Army – What we do, <https://www.army.mod.uk/what-we-do/>, 16 April, 2018

²³ The British Army – Operations and Deployments, <https://www.army.mod.uk/deployments/>, 16 April, 2018

Currently Africa is the most important continent for the EU concerning the security challenges, among others the illegal migration and trafficking, as well as terrorism.

On the 1 April 2018, the Royal Air Force (RAF) celebrated its 100th birthday.²⁴ It is the world's first independent air force and the strength of this service is about 30,000 troops. RAF is currently engaged in 13 missions on 4 continents and in 22 countries. Its tasks are: responding to threats, preventing conflicts, watching the skies, delivering aid, combating cyber threats and working on partnership.²⁵ The UK's efforts against Daesh²⁶ in Iraq and Syria are part of a wider strategy to promote peace and prosperity in the Middle East and North Africa. Since June 2014, the UK has pledged over 169 million Pounds in humanitarian aid to Iraq. To date the UK has promised more than 2.46 billion Pounds (the UK's largest ever response to a single humanitarian crisis) to support people affected by the Syrian conflict.²⁷

The Royal Navy is a complex and well-functioning machine with many parts and one purpose; to protect the nation's interests. About 30,000 highly skilled men and women are in the well-known five arms: the Surface Fleet, the Submarine Service, the Fleet Air Arm, the Royal Marines and the Royal Fleet Auxiliary.²⁸

The British Armed Forces represent more than 10% of the EU member states' military personnel. The UK is not only a country but a super world power with a huge nuclear capability and with international experience in several continents. Losing this power will really hurt the EU. The BREXIT diminishes the EU's global influence or international interest enforcement, and this is not good news since the EU's self-defence depends on the member states' military competencies.

UK's military equipment and capabilities

According to the British Army's website, the British soldier is the best piece of kit they have but what they carry with them is part of the equation, too. Whether British soldiers arrive by armoured vehicle, parachute or boat, they are trained to operate anywhere in the world.²⁹

This process will continue in the future, too. The Strategic Defence and Security Review (SDSR 2015) published in November 2015 outlined plans for a Joint Force 2025, capable of deploying an expeditionary force of around 50,000, including a maritime task group, a land division, an air group and a Special Forces task group. The Government stated that it would meet the NATO guideline of spending at least

²⁴ Royal Air Force, <https://www.raf.mod.uk/>, 18 April, 2018

²⁵ Royal Air Force, What we do? <https://www.raf.mod.uk/what-we-do/>, 18 April, 2018

²⁶ Daesh is an acronym for the Arabic phrase al-Dawla al-Islamiya al-Iraq al-Sham (Islamic State of Iraq and the Levant). <https://www.mirror.co.uk/news/world-news/what-daesh-mean-isis-threatens-6841468>, 19 April, 2018

²⁷ Royal Air Force, Combating Daesh, <https://www.raf.mod.uk/what-we-do/combating-daesh/>, 18 April, 2018

²⁸ Royal Navy – Our capability, <https://www.royalnavy.mod.uk/our-people/our-capability/>, 19 April, 2018

²⁹ The British Army – Vehicles and equipment, <https://www.army.mod.uk/equipment/>, 16 April, 2018

2% of GDP on defence each year, and would also increase the defence budget by 0.5 percent a year in real terms, and invest 178 billion Pounds in defence equipment over the next decade (an additional 12 billion Pounds compared to previous plans).³⁰

The UK is among the biggest arms producers in all over the world. With a global share of 4.6%, the UK's weapon export occupies the 6th place in this ranking. (See the next chart.)³¹

THE MAIN EXPORTERS AND IMPORTERS OF MAJOR WEAPONS, 2012-16					
Exporter		Global share (%)	Importer		Global share (%)
1	USA	33	1	India	13
2	Russia	23	2	Saudi Arabia	8.2
3	China	6.2	3	UAE	4.6
4	France	6.0	4	China	4.5
5	Germany	5.6	5	Algeria	3.7
6	UK	4.6	6	Turkey	3.3
7	Spain	2.8	7	Australia	3.3
8	Italy	2.7	8	Iraq	3.2
9	Ukraine	2.6	9	Pakistan	3.2
10	Israel	2.3	10	Viet Nam	3.0

*Figure 4*³²

The worldwide armament export volumes show that British weapons, military equipment and defence appliances are world famous. The UK is among the best countries on the international weapon export list. The main buyers of the British military technology are countries from the Middle East. The Department for International Trade's figures show that almost two-thirds (63%) of exports go to the Middle East and North Africa (MENA-countries). Of those Saudi Arabia is by far the most important client. The second is United Arab Emirates (UAE) and the third is Egypt. Brimstone missiles, Typhoon Jets and Paveway laser-guided bombs have all been sent there. Despite the human rights concerns in the Middle East, UK's arms industry actors argue that the national defence sector directly benefits 140,000 jobs in the country.³³

³⁰ Size and Capability of the UK's Armed Forces for Contributing to Global Peace, Stability and Security; House of Lords, Debate on 23 November 2017, <https://researchbriefings.parliament.uk/ResearchBriefing/Summary/LLN-2017-0083#fullreport>, 16 April, 2018

³¹ SIPRI Yearbook 2017, Armaments, Disarmament and International Security – Summary, <https://www.sipri.org/sites/default/files/2017-09/yb17-summary-eng.pdf>, p. 15, 20 April, 2018

³² Source: SIPRI Yearbook 2017, Armaments, Disarmament and International Security – Summary, <https://www.sipri.org/sites/default/files/2017-09/yb17-summary-eng.pdf>, p. 15

³³ From Egypt to Saudi Arabia, here's who the UK is selling arms to <http://www.bbc.co.uk/newsbeat/article/38365529/from-egypt-to-saudi-arabia-heres-who-the-uk-is-selling-arms-to>, 20 April, 2018

The British Army leans on personal equipment; small arms and support weapons; combat and protected patrol vehicles and reconnaissance as well as logistic vehicles; and engineering equipment. Combat vehicles represent firepower, mobility and protection. These are the three key aspects of any fighting vehicle. The most important versions of the British military equipment are as follows.

a, Combat vehicles:

- Challenger 2 is a main battle tank (See on the picture.³⁴);



- Warrior is an infantry fighting vehicle;
- Bulldog and FV430 Series are troop carriers;
- Stormer is a mobile platform for the Starstreak High Velocity Missiles(HVM).

b, Protected Patrol Vehicles:

- Foxhound is a protected patrol vehicle;
- Husky is a protected support vehicle;
- Mastiff is a heavily armoured 6x6-wheel drive patrol vehicle;
- Panther is a protected patrol vehicle;
- Wolfhound is a six-wheeled heavy-armoured truck, which is part of the Tactical Support Vehicles(TSV);
- Ridgback is a 4x4-wheel drive protected patrol vehicle;
- RWMIK³⁵ Land Rover is a lightly-armoured, highly mobile fire support and force protection vehicle.

c, Reconnaissance Vehicles:

- Scimitar Armoured Reconnaissance Vehicle is an armoured fighting vehicle, which has an exceptionally low ground pressure and small size;
- Spartan, Samaritan, Sultan and Sampson vehicles are very small armoured personnel carriers;
- Jackal 2 is a high mobility weapon platform;
- Coyote is a light tactical support vehicle.

d, Engineering Equipmente,

e. Logistics Vehicles

f, Artillery and Air Defence

³⁴ Source:<http://www.janes.com/article/78099/challenger-2-mbt-lep-selection-draws-closer>

³⁵ Revised Weapons Mounted Installation Kit – RWMIK

- AS90 is a 155mm self-propelled gun;
- L118 is a 105mm light gun;
- Guided Multiple Launch Rocket System (GMLRS) is the mainstay of the British Army's deep and shaping fires capability;
- Rapier Field Standard C is a technologically advanced short range air defence system;
- Desert Hawk is a small and versatile Unmanned Aerial System;
- Starstreak HVM is designed to counter threats from very high performance, low flying aircraft and fast "pop-up" strikes by helicopter attacks.

g, Communication and Surveillance Equipment

- Digital (Falcon), Tactical (BOWMAN) and Satellite Communications.³⁶

The RAF is operating with approximately 1,200 planes and helicopters. The best-known military air vehicles are as follows.

a, Planes

- Training: 120 TP Perfect, Hawk T1, Hawk T2, King Air B200, Embraer Phenom 100, Texan T MK1, Tucano T1, Tutor T1, Vigilant T1, Viking T1;
- Transport: Atlas (A400M), Bae146, C-130J Hercules, C-17 Globemaster III.;
- ISTAR³⁷: Airseeker, E-3D, P-8A, Sentinel R1, Shadow R1;
- Combat: F-35 B Lightning, Tornado GR4, Typhoon FGR4 (See on the picture below.)³⁸



- Air refuelling and transport: Voyager.

b, Helicopters

- Training: Airbus H 135 Juno, Airbus H 145 Jupiter, Griffin HT1, Squirrel HT1;
- Transport: Leonardo GrandNew;
- Support: PUMA HC2, Chinook;
- Multi-role: Griffin HAR2.

³⁶ The British Army – Vehicles and Equipment, <https://www.army.mod.uk/equipment/>, 16 April, 2018

³⁷ Intelligence, Surveillance, Target Acquisition and Reconnaissance – ISTAR

³⁸ Source: <https://www.raf.mod.uk/aircraft/>

c. UAV³⁹

ISTAR: MQ-9A Reaper. (Other well-known UAVs of the British Armed Forces are: Watchkeeper, Desert Hawk III., Black Hornet and Taranis, which is under development. They were not listed on the website.)

In the future, MQ-9B Protector is going to replace the MQ-9 Reaper. UK is going to purchase 16 Protectors. This UAV complies with the British national and international airspace and safety regulations.⁴⁰

In spite of the reductions in the last decades, the Royal Navy remains one of Europe's most potent naval forces, since it is able to be deployed globally with a full spectrum of maritime capabilities. In July 2016, the British Parliament voted in favour of replacing the four Trident missile-armed strategic submarines that form the UK's nuclear deterrence. The SUCCESSOR programme ensures the sustainment of a significant submarine construction and equipment industry for twenty years and more. Besides, it the National Shipbuilding Strategy (NSS) that is going to maintain a substantial indigenous industrial base for surface warships.⁴¹

	Class	First ordered	Total	Completed
Submarines	ASTUTE – Nuclear-powered attack submarine	1997	7	3
	SUCCESSOR – Nuclear-powered strategic submarine	Planned	4	0
Surface Vessels	QUEEN ELIZABETH – Aircraft Carrier	2008	2	0
	Batch II RIVER – Offshore Patrol Vessel	2014	5	0
	Type 26 – Frigate	Planned	8	0
	General Purpose Frigate (BMT's VENATOR 110 concept)	Planned	5+	0
Auxiliaries	TIDE – Replenishment Tanker	2012	4	0
	Solid Support Ship – Replenishment Ship	Planned	3	0

*Figure 5: Current and Planned British Royal Navy Construction Programmes in 2016.*⁴²

³⁹ Unmanned Aerial Vehicle – UAV

⁴⁰ Royal Air Force, Aircrafts, <https://www.raf.mod.uk/aircraft/>, 18 April, 2018

⁴¹ Conrad Waters: British Naval Construction – Current Programmes and Future Prospects, European Security and Defence, 5/2016, ISSN 1617-7983, p 48-50.

⁴² Source: Conrad Waters: British Naval Construction – Current Programmes and Future Prospects, European Security and Defence, 5/2016, ISSN 1617-7983, p 51.



*Figure 6: HMS Queen Elizabeth Aircraft Carrier*⁴³

The 3.1 billion Pounds HMS Queen Elizabeth aircraft carrier was commissioned in December 2017 in Portsmouth, and in the future this flagship will be a proper platform to deploy the F-35B Lightning II type jet fighters. With this capability, the Royal NAVY will be able again to deploy aircrafts to designated overseas military crisis or conflict areas. After the BREXIT, this great British strategic opportunity will not be available for the EU, which in this case can rely only on France or Italy, having aircraft carriers, too.⁴⁴

The ship developments will generate export opportunities especially for the proposed General Purpose Frigate that could provide a catalyst for this change. That way the vulnerability of the naval industry might be decreased.

Among related British companies BAE Systems are dominating the naval construction, but there are other players, too. Many firms are considerably successful in the export, among others the Rolls-Royce's Marine division, Thales UK's maritime systems and the naval missile of MBDA. BMT Defence Services are in leading position in the area of conceptual and preliminary warship design. QinetiQ has a broad maritime business ranging from mission systems to survivability assessment.⁴⁵

With the BREXIT, the EU will not be able to use the above listed huge British military power for its international missions any more. This will be a visible military and defence deficit in the future. Leaving the EU and losing the free trade constructions, UK's multinational defence industry will face several administrative, financial and customs difficulties with EU partners.

⁴³ Source: <https://www.dailystar.co.uk/news/latest-news/656241/HMS-Queen-Elizabeth-Royal-Navy-Aircraft-Carrier-Warship-Portsmouth-Aircraft-F-35b-Sea>

⁴⁴ These are the 20 aircraft carriers in service today, <http://www.businessinsider.com/aircraft-carriers-list-in-service-patrolling-the-world-2018-2>, 5 May, 2018

⁴⁵ Conrad WATERS: British Naval Construction, p 48-52.

UK's nuclear power role

The UK has a significant nuclear weapon capability. This power is first of all a deterrent one that gives a certain international respect for the country. With the BREXIT, the EU will lose one of its two member states (the most significant one), which due to their nuclear capability have a special international prestige.

At the beginning of 2017, nine states (the United States, Russia, the United Kingdom, France, China, India, Pakistan, Israel and the Democratic People's Republic of Korea) possessed 14,935 nuclear weapons of which 4,150 were deployed with operational forces. Nearly 1,800 of them are kept in a state of high operational alert.⁴⁶

The UK maintains 215 nuclear warheads on their submarines as a deterrent force. With this figure, UK is among the leading nations and occupies the 5th place after the US, Russia, France and China. (See the chart below.)⁴⁷

WORLD NUCLEAR FORCES, 2016			
Country	Deployed warheads	Other warheads	Total inventory
USA	1 800	5 000	6 800
Russia	1 950	5 050	7 000
UK	120	95	215
France	280	20	300
China	-	270	270
India	-	120-130	120-130
Pakistan	-	130-140	130-140
Israel	-	80	80
North Korea	-	(10-20)	(10-20)
Total	4 150	10 785	14 935

.. = not applicable or not available; - = zero;
() = uncertain figure. 'Other warheads' includes operational warheads held in storage and retired warheads awaiting dismantlement. All estimates are approximate and as of Jan. 2017.

Figure 7⁴⁸

The role of British nuclear weapons is to deter the most extreme threats the nation might face in the short or long term. Abandoning this nuclear deterrent would undermine the UK's and its allies' security. The British security experts say that the country is safer with nuclear weapons than without.

Only the UK, the US and France in NATO can maintain nuclear weapons under the nuclear Non-Proliferation Treaty. Other members are prohibited from developing them by law. The UK is a responsible nuclear weapon state committed to the long term goal of a world without nuclear weapons. UK possesses around 1% of the total global stockpile of approximately 17,000 nuclear weapons. British nuclear missiles

⁴⁶ SIPRI Yearbook 2017, p 16., 20April, 2018

⁴⁷ Ibid., p 16., 20April, 2018

⁴⁸ Source: SIPRI Yearbook 2017, p 16.

do not target any state. This nuclear deterrence should influence the decision-making of any state that might consider transferring nuclear weapons or nuclear technology to terrorists. Only the UK's Prime Minister can authorise the launch of British nuclear weapons. Since 2010, the number of on-board warheads in each submarine has been reduced from 48 to 40, the requirement for operationally available warheads to not more than 120 and the number of operational missiles on each submarine to not more than eight.⁴⁹

The UK is the only declared nuclear weapon state that has reduced its nuclear deterrent capability to a single weapon system. It has been stated that the investment, required to maintain deterrence, will not come at the expense of the conventional capabilities. Brits have reduced their nuclear forces by over half from their Cold War peak in the late 1970s, and will reduce the overall stockpile (now 215) to no more than 180 war heads by the mid-2020s. The Trident Alternatives Review in 2013 demonstrated that no other system is as capable as the current Trident-based deterrence, or as cost effective as it is. The four planned carrier submarines will probably cost 31 billion Pounds to build. Brits have also set a contingency of 10 billion Pounds on top. This is spread over some 35 years and equates to 0.2% per year of government spending. In-service costs of the UK's nuclear deterrence will be similar to those of today, around 6% of the defence budget. An agreement signed in 1963 allows the UK to reduce costs by sharing procurement of Trident missiles and other components with the US while maintaining full operational independence.⁵⁰

Maintaining a minimum nuclear deterrent force is fully consistent with all British international legal obligations. A possible decision to give up this nuclear deterrence would, for political and technical and industrial reasons, be very difficult to reverse. In any event, Brits judge that a submarine will remain by far the least vulnerable of all the platform options. Nuclear weapons remain a necessary element of the defence capability as UK needs to deter threats from others possessing nuclear weapons. Conventional forces alone cannot deliver the same deterrent effect.⁵¹

UK's international missions and deployments

The UK is a huge contributor to international peace support missions. British troops are engaged in several expeditionary operations in all over the world. In a year about 40-50,000 British soldiers are deployed in a number of missions and deployments. The UK's military operations abroad are focussed on those (mostly African and Asian) countries, where Brits have historical footprints, political influence and economic interests.

Outside the country, a significant part of UK Armed Forces personnel is currently providing assistance in training or pursuing operations in Africa. The UK has been participating in helping build the capacity of national military forces, ensuring that a number of states across Africa can respond appropriately to the security threats they

⁴⁹ Ministry of Defence, UK Nuclear Deterrent, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/510878/Fact_sheet-nuclear_deterrent_FINAL_v15.pdf, 22April, 2018

⁵⁰ Ibid., 22April, 2018

⁵¹ Ibid., 22April, 2018

face, including terrorism, illegal wildlife trade, violations of human rights and emerging humanitarian crises. The British Army Training Unit Kenya (BATUK) provides training to exercising units preparing for operations or for assuming high-readiness tasks. BATUK consists of around 100 permanent staff and another temporary 280 personnel. According to an agreement with the Kenyan Government, up to six infantry battalions per year carry out eight-week exercises there.⁵²

The UK and its partners have spent significant resources in Afghanistan to help rebuild and stabilise the country. Since the end of ISAF mission (2014), British troops have been stationed in Kabul where they provide force protection, training and advisory role to the Afghan National Army Officer Academy and Afghan National Police. British soldiers have supported a wide range of projects to improve education, healthcare, economic growth and local governance in Helmand and across the country. International troops and the Afghan National Security Forces have contributed to the relatively improved security situation.

The 2016 NATO Summit in Warsaw set the conditions for the establishment of an Enhanced Forward Presence (EFP) in Estonia, Latvia, Lithuania and Poland to strengthen Euro-Atlantic security. UK Armed Forces have a primary role in NATO's EFP, with British troops leading a multinational Battlegroup in Estonia from 2017. About 800 British personnel are rotating on a continuous basis alongside Danish, French and host nation Estonian forces. From January 2017, the UK assumed responsibility for NATO's Very High Readiness Joint Task Force contributing about 3,000 personnel, leading a structured group of 14 partner nations.⁵³

The British Army has maintained a presence in Belize since its independence (1981). Currently, the British Army Training Support Unit in Belize (BATSUB) enables close country and tropical environment training to troops from the UK and international partners. The BATSUB is manned by 12 permanent staff and employs more than 100 local civilians. The Unit carries out up to five dismounted close combat exercises per year. A number of UK and Belize international partners conduct jungle training in Belize.⁵⁴

The British Army in Brunei comprises an infantry battalion of Gurkhas and Army Air Corps Flight of Bell 212 helicopters. The tropical climate and terrain are well suited to jungle training. The Jungle Warfare Division located in Brunei is the Army's jungle warfare school. It runs a number of courses, ranging from Jungle Warfare Instructor Courses to the Operational Tracking Instructor Course. Training in Brunei focuses on mastering infantry skills, ranging from basic field craft to more advanced jungle survival techniques.⁵⁵

⁵² The British Army in Africa, <https://www.army.mod.uk/deployments/africa/>, 22 April, 2018

⁵³ Enhanced Forward Presence, <https://www.army.mod.uk/deployments/baltics/>, 22 April, 2018

⁵⁴ The British Army in Belize, <https://www.army.mod.uk/deployments/belize/>, 22 April, 2018

⁵⁵ The British Army in Brunei, <https://www.army.mod.uk/deployments/brunei/>, 22 April, 2018

The prairie of Alberta in Canada has provided an excellent opportunity for the British Army to train on a large scale since 1972. The British Army Training Unit Suffield (BATUS) is located on one of the most sparsely populated areas of the plain. BATUS is equipped with more than 1,000 vehicles, including a full complement of Challenger 2 tanks and Warrior Infantry Fighting Vehicles. More than 400 permanent staff and 1,000 temporary deployed staff provide highly demanding combined arms – infantry, armour, artillery, engineers, air defence, logistics and equipment support – manoeuvre and live firing training for the armoured forces of the British Army and its allies. The training area at BATUS is the size of Wales.⁵⁶

The British Army in Cyprus works in a tri-service headquarters and is tasked with protecting the two Sovereign Base Areas (SBAs at Akrotiri and Dhekelia) and associated retained sites. The Army presence includes two resident infantry battalions and supporting arms, such as the Royal Logistics Corps, Royal Army Medical Corps, Royal Electrical and Mechanical Engineers, Royal Military Police and others located in both SBAs. The Bases, which cover 98 square miles, enable the UK to maintain a permanent military presence at a strategic point in the Eastern Mediterranean. British soldiers also serve with United Nations Forces in Cyprus.⁵⁷

In line with the announcement of the Strategic Defence and Security Review (SDSR) of 2010, it is the government's intention to rebase the British Army from Germany to the UK by 2020. On the 4 November 2015, the Ministry of Defence confirmed that the final Field Army units will withdraw from Germany in 2019, in accordance with the Government's SDSR 2010 commitment.⁵⁸

The British Overseas Territory of Gibraltar is a rocky headland on the southern coast of the Iberian Peninsula. It has an area of just over two square miles and a population of 30,000 inhabitants. It enjoys a strategic location at the western entrance to the Mediterranean, where the straits between Europe and Africa are only 14 km wide. In 1991, the last UK-based infantry battalion left Gibraltar and the role of defending and securing the Rock was taken up by the Royal Gibraltar Regiment. The Army in Gibraltar retains the Rock as a Permanent Joint Operating Base for UK operations in the region. Gibraltar is well situated to observe shipping channels through the straits, and it could dominate the western entrance to the Mediterranean in time of war and it is an important base for NATO, too.⁵⁹

The UK has a leading role in the 67-member Global Coalition committed to defeating Daesh. British troops are not in a combat role in Iraq, but are on the ground with coalition partners providing training and equipment to Iraqi Security Forces (ISF) and Kurdish Security Forces (KSF). The British Army is using hard-won experiences and skills from Afghanistan to help the ISF and KSF conducting the fight against Daesh. British troops trained more than 25,000 Iraqi forces, including 6,600 Kurdish Peshmerga, in infantry actions, weapons maintenance, and counter-IED, medical and

⁵⁶ The British Army in Canada, <https://www.army.mod.uk/deployments/canada/>, 22 April, 2018

⁵⁷ Cyprus, <https://www.army.mod.uk/deployments/cyprus/>, 22 April, 2018

⁵⁸ The British Army in Germany, <https://www.army.mod.uk/deployments/germany/>, 22 April, 2018

⁵⁹ The British Army in Gibraltar, <https://www.army.mod.uk/deployments/gibraltar/>, 22 April, 2018

engineering skills. Following additional deployments, there are up to 1,400 UK military and civilian personnel supporting counter-Daesh operations.⁶⁰

The Falkland Islands are a dependent territory of the UK and will remain so for as long as the Islanders wish them to do so. British Armed Forces protect the Falkland Islands to deter military aggression against The South Atlantic Overseas Territories.⁶¹

The British troops are located in several places in all over the world and they have important experiences in training, fighting and stabilising the situation. With the BREXIT, these colourful military experiences and skills will be missing from the EU's security tools and it will not be easy to substitute them. Especially the European influence on Africa will be limited with "losing" strategic bases and a real Africa-expert partner in struggling for the black continent.

French-German-Italian axis, Eurocorps and Battlegroups in the EU

As a consequence of the BREXIT the French-German-Italian axis will be strengthening inside the EU. In this case, the following question can be raised: Which one from the three states will be the dominant military power in the EU? Thanks to geopolitical and geostrategic advantages of France, this virtual race probably will result with a French ascendancy concerning the EU's security and defence policy. Furthermore French politicians and military leaders are keen on having dominancy, given by the historical chance of BREXIT. So the French leading role is most possible or at least we will face this intention mainly from the side of Paris.

Germany is not able to take over the UK's virtually leading military role, since it has basically different historical heritage and geostrategic background. EU nations keep a kind of distance from Germany because of the past. The country is in a safe position in the Middle of Europe, so it is not directly affected by the security challenges jeopardising the edge of the Alliance and so it is not so motivated to do more. Italy has not enough international respect, experience and influence. However Italy is located in the southern part of Europe in a strategic position and it is a maritime power in the middle of the Mediterranean Sea and beyond; it is directly suffering from the North-African security challenges. Despite its (by the threats driven) motivation, Italy is not able to represent the whole EU's security and defence policy, at least around Europe as a whole or all over the world.

Only France, which is a nuclear power, too, remains in the bowl as a potential quasi military leader inside the EU. Its territorial dimension, international reconciliation commitments (especially in Africa) and willingness to do so make France suitable for becoming the main actor of EU's security, defence and military policy. In addition, after the BREXIT France will remain the only nuclear power and the sole UN permanent member inside the Union, which has a say in world policy, thanks to its military capability.

⁶⁰ The British Army in Iraq, <https://www.army.mod.uk/deployments/iraq/>, 22 April, 2018

⁶¹ South Atlantic Islands, <https://www.army.mod.uk/deployments/south-atlantic-islands/> 22 April, 2018

Eurocorps is a unique multinational headquarters (other NATO Rapid Deployable Corps being only national, bi-national or tri-national) that originally was a French-German Corps. The doors are open for other nations with the same rights as the founding nations have. Between 1993 and 1996, Belgium, Spain and Luxembourg joined the Headquarters. Greece, Italy, Poland, Romania and Turkey are Associated Nations of the Eurocorps. The mixing of nationalities is visible in each cell, section, platoon, company, branch or division. Located in Strasbourg, Eurocorps is close to the European Union's and NATO's decision-making centres, which enables it to have privileged relations at political and military levels.⁶²

The EU Battlegroup (EUBG) is a militarily effective, credible and coherent, rapidly deployable force, capable of conducting stand-alone operations or participating in the initial phase of larger operations. The EU Battlegroups are framed within the context of the CSDP of the EU. They are based on a combined- arm, battalion-sized force, reinforced with combat-support and combat service- support elements. Battlegroups are about 1,500 personnel-strong per each, depending on lead nation's decision. They are capable of achieving initial operational capability in the theatre within 10 days, after a decision of the European Council has been taken to launch the operation. They must be capable of operating as stand-alone forces for up to 30 days with a possible extension to a maximum of 120 days duration from Initial Operation Capability. Since July 2016, the Eurocorps, as first multinational headquarters, assumed the role of the deployable Force Headquarters of two consecutive EU Battlegroups.⁶³

At the moment, the establishment of well-functioning common Armed Forces in the EU is not possible, complex national contributions remain the only hope. The EU is keen on forming joint European Armed Forces that would be able to give adequate responses to many security challenges. Despite the ambitious plans for setting up 50-60,000-strong Eurocorps, the Alliance has only fragmented 1,500- strong Battlegroups as quick response forces. These consist of the soldiers coming from the member states' offering. There is a little chance that EU member states will be able to make a quick decision and to react rapidly and adequately to a widespread crisis situation.

The EU should rather focus on civilian crisis management than on military missions

The EU is a relatively loose Alliance among member and associated countries. There are so many interests and aspects that it is nearly impossible to get a unanimous, consensus decision from the 28 member states on the complicated political, economic, defence and security issues. The inside differences and uncertainties usually hinder quick decision-making and response. That is the reason why the EU is not able to fully restrain the new security challenges, not only in the world but next to its door, namely in its neighbourhood.

⁶² Eurocorps – A unique status in the heart of Europe, <https://www.eurocorps.org/about-us/contributing-nations/> 24 April, 2018

⁶³ Eurocorps – European Battle Group, <https://www.eurocorps.org/readiness/european-battle-group/> 24 April, 2018

Since the missing active military organisation, available troops and capabilities, the EU is not able to conduct large scale international military missions and operations. Without NATO contribution, the Alliance’s infrastructure and capabilities, the EU has no chance to successfully fulfil its peace support tasks. Facing with permanent non-military security challenges, the EU should mainly focus on law enforcement and internal police objectives in order to avoid the escalation of smaller crises.

According to the SIPRI Yearbook 2017, Europe is the second most peaceful place on the globe behind America and ahead of Africa, Asia and the Middle East. Africa was the region with the highest number of conflicts in 2016 (19 active conflicts); followed by Asia (15 conflicts). Ten conflicts were recorded in the Middle East, three in Europe and two in the America. Among the five most peaceful countries are four from Europe (1. Iceland, 3. Portugal, 4. Austria, 5. Denmark).⁶⁴ (See the chart below.)

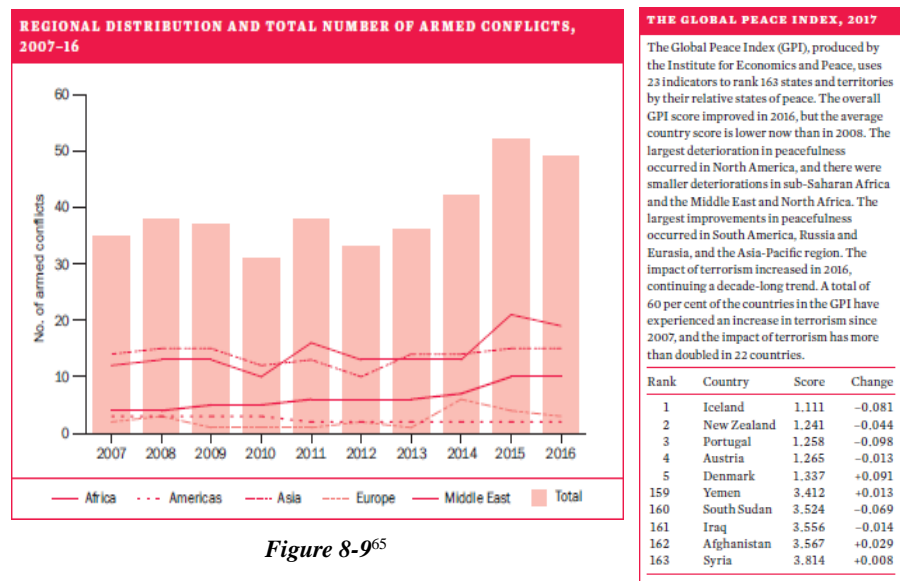


Figure 8-9⁶⁵

Between 2013 and 2016, it was most probably the illegal migration and the terrorist attacks, the deteriorated EU-Russia relations, as well as the armed conflict in Eastern Ukraine and the turmoil in Turkey that spoiled the earlier more stable security situation in Europe.

At the moment, Europe is not able to exert any significant political influence in other continents. The cohesion in foreign and security policy is not available within the Alliance. In its common policy, the EU still relies on intergovernmental co-ordination processes. EU is a global economic and trading power whose 28 member states account for more than a quarter of worldwide economic output. Despite this fact, EU is more of a potential power than a real, present one. Inside the Alliance the

⁶⁴ SIPRI Yearbook 2017, p. 3., 20April, 2018

⁶⁵ Source: SIPRI Yearbook 2017, p. 3.

common strategy, political will and instruments are missing towards big players as China or Russia in the world. The EU has learned to stand on its own feet and to provide stability for its security situation, but the Trans-Atlantic link is going to remain inevitable for the Union in the future.⁶⁶ Due to the BREXIT, EU's defence capability will be decreasing and that way its global stabilisation power will shrink, too.

NATO remains the main military and defence actor in the northern part of the globe, the EU should not be a substitute

The United States, Canada and the United Kingdom are traditional Euro- Atlantic Allies, which make a stable axis in the northern part of the globe. In a year, one of the strongest NATO members, the United Kingdom will leave the EU. Losing a great security and defence actor will be a real damage for the EU's CSDP. As a consequence of the BREXIT, we can expect an increasing British contribution in NATO missions. The UK will focus on NATO as the guarantor of its security and global interests. So, the Euro-Atlantic defence identity remains the prime solution and this is in favour of the EU, too.

Jens Stoltenberg, NATO General Secretary said during the 2018 Munich Security Conference that after BREXIT 80% of defence spending of NATO members would come from non-EU states.⁶⁷ This is a strict criticism and a good summary of the real situation, which is not so flattering for the EU members. Earlier, after his inauguration in 2017 Donald Trump criticised the European NATO-members spending not enough for defence purposes. Thus, it is easy to get the conclusion that the EU as a whole focuses on defence and security only superficially.

Since its limited capabilities and overloaded member states, EU will not be for a long time a proper substitute for NATO. Usually the double members offer the same military forces for NATO and EU engagement or missions hoping that there will not be a parallel demand. Countries inside the EU have too diversified armament and equipment so they hardly find perfectly compatible elements. For example, EU states have just 42 air-to-air refuelling aircrafts, consisting of 12 different types. By comparison, the US has 550 refuelling airplanes of only four types. The NATO-EU relationship should not be a kind of rivalry with duplications. It should rather be a complementary co-operation, where both parties have their benefits and they exist in a perfect synergy.⁶⁸

The NATO-EU relationship represents a strategic partnership. In 2002, the NATO-EU Declaration on a European Security and Defence Policy was signed in order to synchronise the common interests. The "Berlin Plus" arrangements from 2003 provide the basis for NATO-EU cooperation in crisis management. EU-led

⁶⁶ Prof. Dr. Sven Bernhard GAREIS: A Global Role for Europe, *Concordiam – Journal of European Security and Defense Issues*, Volume 6, Issue 3, 2015, pp. 11-15.

⁶⁷ Pia SEYFRIED: "Risiko" first – "Chancen" second – *Blick der NATO auf die EU-Verteidigungsbestrebungen*, *Europäische Sicherheit und Technik* 3/2018, p. 13.

⁶⁸ Dr. DINOS Anthony Kerigan-Kyrou: The EU and NATO – Promoting Collaboration Between Two of The World's Most Powerful Organizations, *Concordiam – Journal of European Security and Defense Issues*, Volume 6, Issue 3, 2015, pp. 18-19.

operations can use NATO's collective assets and capabilities, including command arrangements and assistance in operational planning. The co-operation at the operational level is realised by permanent military liaison arrangements. Since 2005, the NATO Permanent Liaison Team has been working at the EU Military Staff and vice-versa an EU Cell is operational at SHAPE (NATO's strategic command for operations in Mons, Belgium) from 2006. Key areas of NATO-EU cooperation have been especially in the Western Balkans and Afghanistan. In recent years, this co-operation was expanded to maritime security, as NATO and EU naval forces have worked together in anti-piracy missions and in the migrant crisis in the Aegean Sea. In May 2003, the NATO-EU Capability Group was established in order to ensure the coherence and mutual reinforcement of NATO and EU capability development efforts. Experts of the European Defence Agency and NATO contribute to the work of the Capability Group. There is a transparency and complementarity between NATO's work on "Smart Defence" and the EU's "Pooling and Sharing" initiative. Both NATO and the EU are committed to combat terrorism and the proliferation of weapons of mass destruction (WMD), to counter hybrid threats, to provide energy security and to cope with cyber-crimes. In February 2016, NATO and the EU signed a Technical Arrangement on Cyber Defence, which provides a framework for exchanging information and sharing best practices and experiences between the two organizations.⁶⁹

The EU countries are hesitating, should they give up certain military capabilities with focusing on a kind of specialisation or should they protect and retain their full spectrum military capabilities. It is certain that small EU countries are not able to realise this second possibility, while after the BREXIT, a huge member with a wide range military skills will be missing from the EU's defence capabilities.

BREXIT will bring a new situation that will show that the EU is pretty vulnerable. After this enlightenment, EU should reform its security and defence policy and it has to lean much more on NATO as it did earlier. It has no sense to have parallel capabilities, so EU and NATO should be rather a complementary tool for each other than a kind of duplication. NATO is much more developed concerning its military and defence capabilities. At the same time, the EU has much more experiences and practices in state building and stabilisation. So they can reconcile a difficult situation, a crisis or an armed conflict together with NATO rapid reaction military intervention and with EU's peace support operation.

Conclusions

Among the reasons for BREXIT, we should accept that UK has unambiguous objectives in the world that are represented better in NATO and in the Commonwealth than inside the European Union. UK is not able to completely share all its values with the other EU member states. Leaving the EU, it will be a new situation for the UK, but the change in terms of security and defence will be more significant for the Union than for the country. The British government should further retain a full spectrum

⁶⁹ NATO – EU Relations, Fact Sheet, July 2016, https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2016_07/20160630_1607-factsheet-nato-eu-en.pdf, 21 April, 2018

military capability and use its security resources wisely. But the EU should fill in the security gap emerging with the BREXIT. It is obvious that this will be a difficult task.

In order to consolidate its global security and defence position, the EU should concentrate on current European conflicts (Ukraine–Russia) and different crises (illegal migration, deepening extremism, xenophobia, social inequalities etc.), and to resolve them before projecting its stabilisation power to the world. The EU should strengthen its integration process, which should be balanced with the members’ national interests, as well. The biggest burden of the common defence actions is the excessive diversification of military technology, infrastructure and weapon systems inside the EU. Losing a strong supporter and contributor to the EU’s security and defence may strengthen the idea of individual national “self-defence” in some EU countries.

UK is a net contributor to the EU’s budget. It has significant military strength, well-prepared troops, modern equipment and nuclear power. Its soldiers actively take part in several foreign missions and operations. The British troops have precious experiences in training, fighting and stabilising the situation in crisis areas all over the world. With the BREXIT, the EU’s domestic and especially international security tools will become more limited. It can be estimated that the European influence on the stability of the Middle East and Africa – that are among others the most important regions for Europe – will be restricted.

After the BREXIT, it seems that the French dominance inside the EU in military field will be unquestionable. It is obvious that France has significant military power, international respect, determined interests in other continents (especially in the MENA region) and natural intensions to lead the EU’s security and defence policy. Other bigger countries as Germany and Italy are not able to replace the British military. Despite the further plans for developing the Eurocorps, there is a little chance that EU member states will be able to make quick decisions with consensus and to react rapidly to any military conflict situation.

Since the UK is far above the EU’s average in many terms, the Union’s security and defence capabilities will be decreased by the BREXIT. The EU should find the balance between military and non-military crisis response capabilities, which is not an easy task. Nowadays, security challenges are so complex and complicated that nobody can make a difference or draw a borderline between military and non-military challenges. Due to this fact, EU should prepare for both, but should put more emphasis on non-military aspects. NATO is a leading organisation in dealing with traditional military threats, while the EU is an expert in soft security challenges. These two features cannot substitute but must complement each other.

Security co-operation among EU members should be strengthened in facing classic non-military security challenges, since the EU is able to handle first of all these problems (border protection, law enforcement, illegal migration, trafficking, organised crime, extremism etc.). At the same time, it has experiences as well as all the requirements – among others, appropriate institutions and personnel – for handling the above problems. The EU has and shares common values that need to be protected from external negative effects. EU-states alone are not able to cope with the new security challenges, because these are of global or transnational phenomena, which

do not stop at the borders. But it seems that even the common solutions cannot function well enough, since the EU decision making procedure is not suitable for doing so. With using the NATO military support, infrastructure and capabilities, the EU can provide a limited military solution, a broader political reconciliation, an effective economic consolidation and a widespread social stabilisation, during an armed conflict or a crisis situation in the field of its strategic interest. In the future, the UK – as an “old” partner – might play a special role between the EU and NATO, in order to efficiently exploit both sides’ best security and defence attributes.

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KÁROLY KASSAI

NEW CHALLENGES IN THE HUNGARIAN CYBERSPACE

Abstract

Understanding and studying cyberspace and cyberspace operations represent a complex task. Social and technical developments, new digital services, associated vulnerabilities and emerging threats show the complexity of the cyberspace.

The previous almost only technical approach to cyber space and its security *has to be replaced by a comprehensive approach* in our country.

The cyber defence nowadays is no longer equal to antivirus software; and the cyber threats that appear are not equal with the effects of a previous malware infection. Operations causing kinetic effects in cyberspace have appeared.

Cyberspace is sometimes flooded with different information operations, communication campaigns and social networking actions that the media often present as 'cyberspace operations' or 'cyber-attacks'; and this trend has put more colours to the landscape.

Sophisticated hybrid operations *may contain cyber operations with unpredictable impacts*.

The investigation of cyberspace phenomena has already begun in the Hungarian military science. Articles, studies have already started to examine the basic technical issues and questions of legal background to create clear cyberspace picture in the jungle of different point of views.

At the same time, it can be stated that there is no agreed Hungarian national cyberspace terminology, and the Hungarian military terminology has not yet developed.

This article provides structured review of core issues¹ related to cyber operations to support future military developments in Hungary.

Keywords: cyberspace, cyber-attack, military cyber operations, critical infrastructure, Hungarian National Security Strategy, doctrinal challenges, HDF Joint Operational Doctrine, NATO Cyber Operation Doctrine, cyberdefence.

National framework

The general task of national strategies is to define the values to be protected, identify key threats, set targets for risk mitigation and management, identify key actions and allocate resources.

¹ This review is based on a previous article that outlined the basic doctrinal and organizational issues of military cyberspace operations in Hungary. Károly Kassai: Katonai műveletek a kibertérben; Szakmai Szemle 2018/1 (Military operations in cyberspace).

The Parliamentary Resolution on Country Risks (1998) had already determined the threats and the dangers posed to computers and computer networks², however, unfortunately, the resolution has not been updated since.

NATO Strategic Concept in 2010 stated that cyber-attacks against government administrations, businesses, economies and critical infrastructures can reach such a threshold that threatens national and Euro-Atlantic prosperity, security and stability.³ The Secretary General stated in the NATO Annual Report that 'the more sophisticated cyber-attacks can damage infrastructures and affects military operations' in 2017.⁴ This statement is similar to the one made a year ago.⁵ Cyber-attacks can disrupt digital services in EU countries, as an EU report stated in 2016.⁶

According to other EU source, 'our future security depends on transforming our ability to protect the EU against cyber threats, given the fact that both civilian infrastructure and military capability rely on secure digital systems' (2017).⁷

EU report on cyber defence summarised the relevant threats in May 2018. Terrorist groups, non-state actors and transnational criminal groups use the cyber space anonymously, they gather information, organise campaigns against critical infrastructure and attack financial systems. 'The EU and the Member States face an unprecedented threat in the form of politically motivated, state-sponsored cyber-attacks...'⁸

Munich Security Report 2017 said: the speed of digitalization is faster than the growing of traditional defence. 'States must better protect their hardware'; but besides, cyber defence should support media literacy, education of citizens and should protect communications.⁹

Along with the principles set out in the Hungarian Constitution, *description of detailed national military cyber operations is not required in the Hungarian National Security Strategy*. According to the above examples, it is sufficient to note that national security is a complex issue, which requires comprehensive approach including the information challenges too.

Values to be protected include national data assets, secure critical infrastructures and freedom in the cyberspace, too. Ensuring the sovereignty of the

² 94/1998. (XII. 29.) OGY határozat a Magyar Köztársaság biztonság- és védelempolitikájának alapelveiről, p. 3. (Parliament Decision on security principles of Hungary)

³ Strategic Concept for the Defence and Security of the Members of the North Atlantic Treaty Organization, 2010, p. 12.

⁴ The Secretary General's Annual Report 2018, p. 20.

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⁸ Report on cyber defence (2018/2004(INI)); 25.5.2018; K. and B.p.

⁹ Munich Security Report 2017, (Dis) Information, p. 42.

nation and protecting its airspace represent a military task that obviously applies to the cyberspace as well.

The Strategy should formulate the complexity of responses to security issues and the importance of organizational cooperation to achieve national goals.

The police, the investigating authorities, the disaster management and the military forces have different responsibilities in solving emergency situations and disasters, so their cooperation is crucial in cyberspace as well. The tasks of military forces are different in peacetime, crisis and in war conditions, which *may mean more specialised military activities in the cyberspace than in the other operating domains. The Hungarian National Security Strategy (2012) deals also with cyber security.* It mentions cyber threats, the importance of preparation, risk management, coordination and international cooperation, and support for international processes.¹⁰ In the next Strategy, *the severity of cyber threats, hybrid operations, and national risk management requirements should be formulated,* in accordance with the threat levels.

The national cyber security strategy is responsible for defining national goals, cyber security framework and identifying actors and tasks.¹¹ There is a need for a national outlook, which must identify the state – including the defence – functions. In the administrative area, there must be a clear basis for legislation regulating the security of cyberspace operations and defining organizational and functional interfaces.

In case of accurate foundation, cryptography and classified information protection will work harmoniously, complemented by incident management, authority functions and other background activities, as national R&D, education and training systems.

EU requirements appear to require the revision of the Strategy, which is already in force included in a Government's decision by June 2018.¹² Existing strategic requirements are expected to be supplemented by new considerations in the field of national strategy, by single point of contact, computer security incident response teams (CSIRTs), security requirements and incident notification.¹³

In order to establish a lower level of regulation, this document should set out the basic tasks of the armed forces in ensuring a secure cyber space. It should be stated

¹⁰ 1035/2012. (II. 21.) Korm. határozat Magyarország Nemzeti Biztonsági Stratégiájáról, 31. (Governmental Decision on National SecurityStrategy).

¹¹ 1139/2013. (III. 21.) Korm. határozat Magyarország Nemzeti Kiberbiztonsági Stratégiájáról (Governmental Decision on National Cyber Security Strategy).

¹² The revision is ordered by the 1988/2017. (XII. 19.) Korm határozat a Nemzeti Infokommunikációs Stratégia (NIS) 2016. évi monitoring jelentéséről a Digitális Jólét program 2.0-ról (...).(Governmental Decision on Annual monitoring report of National Infocommunication Strategy).

¹³ DIRECTIVE (EU) 2016/1148 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union; article 7. (1), article 8. (1), article 9. and article 16.(1-4).

that in the cases other than peace time, the competences and responsibilities may also change in cyberspace, for national security reasons.

The use of military force can also include not defensive operations, in compliance with international law, so the cyberspace operations – parallel with military operations – may also contain non-defensive military actions.

Additionally, the second generation Hungarian Cyber Security Strategy should be complemented by a short explanation with the military related issues and an implementation plan with the designation of responsible organizations, tasks and deadlines, which will give visibility to the public and the Government.

The general task of the national military strategy is to formulate the military defensive objectives and tasks based on national risks.

In a former Parliamentary Decision, there is a general requirement for the military force development in Hungary: (...) it is necessary to develop the combat support and combat service support capabilities for the use of combat forces.¹⁴

This task should be extended to operations in and through cyberspace, in addition to traditional military operations, in accordance with the recognition of NATO Warsaw Summit.¹⁵ The new challenge affects the units and sub-units of the Hungarian Defence Forces in many ways, both at home and abroad.

International organizations providing military capabilities are settled in Hungary, and international, civilian and military exercises are taking place in our country. Hungarian military units and soldiers serve in different parts of the world, with different organizational subordination and cooperative relationships, so the cyberspace is a daily working environment, with all aspects of cyber threats.

Hungarian military operations – led by NATO, EU or at national level in peace time or in crisis and war time – require *strategic, operational and tactical level communication* in Hungary or abroad, with large scale of close cooperation with military, governmental, non-governmental partners and international organisations, in a not always friendly cyber space.

The above cooperation by the Hungarian Defence Forces is legally binding to ground and air operations, so *the smooth cooperation should be solved also in the cyberspace as soon as possible*.¹⁶

The military operations are ensured by *stationary CIS*¹⁷ services, additional *leased services, mobile and portable communications*.

The outlined communication services *form a constantly changing military cyberspace*; depending on the nature of the command and control that is necessary for the success of military operations, manoeuvres and cooperation.

In order to meet the flexibly changing military requirements, there is a clear requirement for *technically independent, military-owned* and operated, *properly*

¹⁴ 51/2007. (VI. 6.) OGY határozat a Magyar Honvédség további fejlesztésének irányairól, 5. d) p. (Parliament Decision on development of Hungarian Defense Forces).

¹⁵ Warsaw Summit Communiqué 2016, 70. p.

¹⁶ 2011. évi CXIII. törvény a honvédelemről és a Magyar Honvédségről, valamint a különleges jogrendben bevezethető intézkedésekről, 80. §. 13. p. (Act on defence of Hungary and the Hungarian Defense Forces).

¹⁷ Communication and Information Systems

*secured information services*¹⁸, including well organised cyber defence processes and mechanisms.

The question of the military forces applicability in cyberspace is a specific challenge, which must be completely isolated from other technical issues. Cyber security organizations cannot be placed solely in the external or internal security sector, because they have activities with both external and internal threats, as Ádám Farkas noted, which in every case *requires accurate understanding of the situation in cyber space - even before military action*.¹⁹

According to the Hungarian Constitution, 'the basic function of the Hungarian Defence Forces is the military defence of Hungary's independence, territorial integrity and borders, the execution of joint defence and peacekeeping tasks deriving from the international treaties and the rules of international law.'²⁰

To apply the HDF, the Hungarian Government may proclaim a special legal order, according to Ádám Farkas²¹, which *underscores the importance of detecting digital evidences and operating forensics services in cyberspace cases*- but this is not only a military issue.

The Military Strategy does not need such details to be solved, but it must formulate:

- high level guidelines for the use of military force in cyberspace,
- the commitment to the applicability of international law to cyberspace,
- the importance of fulfilling allies commitments,
- the ambitions and the military development goals - also interpreted in cyberspace.

Summary of strategic issues

As a short summary, it can be stated that the Hungarian national strategies (published in 2012-2013) identified the cyber threats.

The functional cyber defence strategy assigns the responsible national organizations and the basic processes. Due to the speciality of cyberspace, the military strategy defined the task of examining the concepts of war from the standpoint of cyberspace. Responding to cyber threats requires the international experience of the past to be processed in the strategies.

There is also a need for formulating the right to enforce national interests in cyberspace. *Not only the war, but the full spectrum of military operations should be investigated*, taking into account the large scale cyberspace effects on critical infrastructures, governmental institutes and military capabilities.

Strategies – or their implementation plan – must indicate core deadlines, milestones and measurement methods, as well as parameters that provide visibility and support

¹⁸ 346/2010. (XII. 28.) Korm. rendelet a kormányzati célú hálózatokról, 2. melléklet, 2-3.p. (Governmental Directive on governmental networks; amendment2.)

¹⁹ FARKAS Ádám: Az állam fegyveres védelmi rendszerének kérdései a kortárs fenyegetések tükrében; *Katonai Jogi és Hadijogi Szemle*, 2015. 1. szám, p. 5-53, p. 30. (Armed defence system issues of State)

²⁰ Magyarország Alaptörvénye, 44. cikk (1). (Constitution of Hungary)

²¹ FARKAS Ádám: Az állam fegyveres védelmi rendszerének kérdései a kortárs fenyegetések tükrében; *Katonai Jogi és Hadijogi Szemle*, 2015. 1. szám, pp. 5-53, p. 43.(Armed defence system issues of State)

the corrections. In order to enforce national strategies, there is a *need for clear requirements and directives that can be the basis for the regulation of the cyber operation's military support*. The 'top-down' approach will ensure the applicability of military force in cyberspace, in accordance with national, NATO and EU requirements, in line with international law.

The above described tasks have close connection with NATO Cyber Defence Pledge, agreed in Warsaw Summit, in 2016.²² The national high level responsibilities, the established security functions, the inside and outside cooperation efforts can provide more secure services in cyberspace, both in public and military fields.

According to the opinion of the candidate defence minister, Hungary has to face new challenges such as the hybrid warfare, which may include information warfare or cyber warfare in the changed security environment.²³

The previously issued ministerial order clearly identifies as a priority in 2018 the strengthening of cyber defence and the implementation of relevant capability developments in the next few years.²⁴

Doctrinal challenges

Examining the requirements of military doctrines or analysing the Hungarian general military practice does not constitute the subject of this article. The starting point is that all pages and lines of the military doctrine *should apply to real military capabilities* and not to future uncertain plans. The generic task of the doctrine is to assist the work of commanders, helping their decisions, but not formulating detailed regulations.

The Hungarian military doctrines are in hierarchical order, according to international practice.

The Doctrine Hierarchy is an approved document that defines the responsibilities and the tasks associated with the drafting and the revision of doctrines. The Hierarchy currently does not contain document on cyber operations, but this cannot represent a problem if the necessary cyberspace tasks appear in other doctrines.

Building on the first part of this article, the current challenge is *to review the doctrines of the Hierarchy* from the perspective of cyberspace operations and *to overcome the relevant shortages*.

The tasks of the review can be identified at three doctrinal levels. The key elements are: the *HDF Joint Operational Doctrine* (current version 4), the second-level *HDF Operational Doctrine and the HDF CIS Doctrine*, and the doctrines at *the third level (information operations, electronic warfare)*.

²² Cyber Defense Pledge (2016. 07. 08.), I. p.
https://www.nato.int/cps/su/natohq/official_texts_133177.htm

²³ The candidate minister announced his program; May 15, 2018;
https://honvedelem.hu/cikk/110274_ismertette_programjat_a_miniszterjelolt.

²⁴ 5/2018. (II. 23.) HM utasítás a honvédelmi szervezetek 2018. évi feladatainak, valamint a 2019-2020. évi tevékenysége fő irányainak meghatározásáról.

The core of doctrines

The HDF Joint Operational Doctrine has unique, 'interface' role among the Alliance's Doctrines, national strategies and level 2-3 doctrines, so it must contain all of the necessary possible military operations and cooperation.

The national level operations require specific cooperation among governmental, non-governmental organisations, civil companies (e. g. ministries, authorities, incident handling actors) in the field of technical electronic information security, information exchange, analysis and advices²⁵, but the use of military force with complex capabilities is different from the daily routine activities as explained earlier.

The crisis situation management actions, disaster recoveries, or support of governmental organisations (e.g. police, emergency services, health system) as well as the military operations have limitation, and the new challenge is the doctrinal level determination of military activities in cyberspace.

The HDF Joint Operational Doctrine – as a 'capstone document' – should provide the basic framework about military operations of HDF at national level or inside operations of alliances. This 'service catalogue' of HDF should show the generic authorization of military operations in cyberspace, according to the Hungarian legal background and support request from the Alliance.

Sustainable military cyber space and military operations

The planning and operating organisations and authorities deal with the full life cycle CIS management functions, from the operational requirements for new information services to system withdrawal from service. These activities consist of system upgrades, hardware and software maintenance, software developments, system modifications, enlargement of services and layered security mechanisms.

The system of normal operating functions must ensure the *'first-line' protection*, which is reinforced by the cyber space defence mechanisms - providing the *'second-line' protection*.

The 'second defence line' philosophy, competences and sources of information are different from the basic defence mechanism, so *this means cooperation and not competition between CIS operating and cyber defence functions*.

The second level doctrines shall maintain the appropriate balance among operating, security and cyber defence functions (and organisations), and create the main cooperation processes for successful military missions supported by daily cooperation.

Parallel with CIS operating actions (or cyber infrastructures/cyberspace services), there are some operations inside this environment (cyber defence actions) or physically independent, 'other' operations (e. g. cyber effects, cyber/threat intel),

²⁵ The first Hungarian governmental level cyber defence exercise (HUNEX 17) in 14. 12. 2017. shows the necessary common thinking and practice for the synchronised activity. A Kibervédelmi Intézet megrendezte első gyakorlatát; <http://www.cert-hungary.hu/hunex-2017>. (The first cyber defence exercise organised by National Cyber DefenceInstitute).

which requires close cooperation among the responsible civil and military organisations and authorities.

The cyberspace operations must have direct, daily contact with other elements (e. g. information operations, intel, EW, legal advisors, military operation planners, media, strategic communication). Due to the complexity of military operations in cyberspace, the Locked Shields international cyber defence exercise – organised by NATO CCD COE²⁶ – *started to train the decision making cycle* from last year, and the ‘strategic game’ will have more importance in future simulations supported by legal advice, strategic communication elements in real time critical infrastructure problems.²⁷

Zoltán Mező provided some recommendation in his article for consistency between different definitions of operations in the level 2 operation doctrine²⁸, so during this revision we should amend the necessary cyber space operations, planning and command-control functions.

János Csombók presented a well organised picture about military operation design (e. g. ends, ways and means as in COPD²⁹), so following this logic, we just *need to interpret the operational planning process in the cyberspace domain*.³⁰

Based on this, 'operating model' of level 2 doctrines may have different solutions, depending on the actual status of doctrine life cycle management and priorities of HDF Doctrine Hierarchy (modifications, amendments or new documents).

The NATO Cyber Operations Doctrine³¹ drafting process started last year. The second draft is in progress in 2018, so the level 2-3 Hungarian doctrines will be amended with new element, and *this outside changing may have positive impact on the situation*.

Before the decisions on level 2 doctrines, it is impossible to describe the level 3 doctrines task in this article. There is a need for synchronizing the different military topics to avoid cross regulations and overlapping. The mandatory NATO CO Doctrine implementation can solve a couple questions, but the Hungarian Doctrine Hierarchy can't 'bypass' the national level responsibility issue at the Hungarian General Staff.

The issue of terminology can some time create 'break' functions in the field of developments or interoperability. *Hungarian acts, national strategies and other governmental level documents have specific expressions, but with limited scope inside the actual documents*, so the definition of an independent, practical cyberspace terminology represents still a future challenge. Under the supervision of the National Cyber Defence Institution, it *should be useful to create a governmental level cyberspace terminology, mandatory for all official actors in Hungary*, supported by permanent coordination with EU and NATO terminologies and short cycle revision period.

²⁶ NATO Cooperative Cyber Defence Centre of Excellence (Tallinn).

²⁷ More than 1000 cyber experts from 30 nations took part in Locked Shields;
<https://ccdcocoe.org/more-1000-cyber-experts-30-nations-took-part-locked-shields.html>

²⁸ MEZŐ András: Doktrínafejlesztés a Magyar Honvédségben; Honvédségi Szemle 2017/4; p. 162. (Doctrine development of Hungarian Defence Forces).

²⁹ Comprehensive Operations Planning Directive.

³⁰ CSOMBÓK János: A kulcsfontosságú tényezők elemzése: a műveleti szerkezet; Honvédségi Szemle 2013/5, p. 9-14. (Key factors analysis: operational design).

³¹ Allied Joint Publication (AJP) 3.20 document.

In military field, this question maybe manageable together with modern CIS terminology development process. Sándor Munk stated in his article; there is a need to create a modern CIS terminology with broader scope as it is done in the IT Regulation.³² In agreement with the author, we should be aware of the borders and the connections among IT (technical and operating) processes, electronic information security and cyberspace expressions. Sándor Munk published his new article about the cyberspace terminology³³ to start a general examination of its basic elements and provide explanation about its elements, processes, actors, activities and its relationships; thus, it would be useful for us to follow his work also in the future.

Conclusion

Cyberspace and cyberspace defence constitute an increasingly complicated issue that requires comprehensive answers.

Governmental, legal, technical, organizational and communication aspects complicate the development of new solutions, both in civil and military areas alike.

Cyberspace – as an operational area – represents new military challenge from national and alliance perspective.

Based on international processes and military requirements, it would be necessary for us to take the necessary basic steps towards military cyber operations, in order to support the military missions and operations.

This article has comprehensively reviewed the national strategies and sought solutions to counter-balancing the threats, including those deriving from the cyberspace.

An effective cyber defence – with the relevant active defence methods and capabilities – is a part of the challenges. In this regard, the use of military force is possible only in special circumstances.

This article has identified some strategic level steps in the field of military capability developments for effective, legal cyberspace operations.

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³² MUNK Sándor: A híradó-informatikai terminológia kérdései a Magyar Honvédségben; 2. rész: A terminológia helyzete és fejlesztése; Hadtudomány 2015/1-2, p. 34. (CIS terminology at Hungarian Defence Forces).

³³ MUNK Sándor: A kibertér fogalmának egyes, az átfogó értelmezést biztosítókérdései; Hadtudomány 2018/1. pp. 116-129, (Cyberspace - questions of expression).

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**PREVENTION OF VEHICULAR RAMMING ATTACKS
INCOOPERATION WITH SMARTLOGISTICS**

Abstract

Every logistics service provider's operation is greatly influenced by the condition and the status of its critical infrastructures. Protecting these infrastructures is not a logistical task, but the logistic provider has to create a collaborative environment, in order to ensure the security of its facilities. It has been assumed that cooperation among logistic providers, law enforcement authorities and resident population can certainly result in efficient prevention of vehicular ramming attacks. The following article describes a possible cooperation method for ensuring effective defence against vehicular terror attacks executed by cargo vehicles.

Keywords: Logistics, critical infrastructure, anti-terror defence, cooperation with law enforcement authorities

Introduction

Vehicular ramming attack has proved to be one of the most threatening kinds of terrorist methods. Consequently, researchers have tried to find defensive solutions to preventing as many similar attacks as possible. The authors of this article work in logistics, boasting about decades-long experiences. Research has been conducted to identify all the cooperation possibilities between logistic organisations and security forces. In this regard, experts have drawn the following conclusion:

- The number of vehicular ramming attacks executed by cargo vehicles indicates an increasing tendency, due to their higher destruction capability, in contrast to any other types of vehicles used.
- A smart cooperation method among logistic providers, law enforcement authorities and resident population in preventing vehicular terror attacks executed by cargo vehicles would ensure efficient security protection against vehicular ramming attacks.

Problem Definition

The terrorist attacks of 11 September 2001 have constituted a catalyst and have changed many things. In addition to the fact that the US proclaimed a war on terror, the attacks have created a warlike situation, a "special" warfare which is very different from any previous warfare, as this is not about demolishing an enemy which can be easily identified in the battlefield as a structured army, thus making it difficult to differentiate between soldiers and civilians, friends or foes and weapons or non-weapons. In the USA, Americans refer to 9/11 as the day when Al-Qaida launched an unprecedented, lethal attack, using passenger aircrafts, resulting in over 3,000 deaths. It was the first time in history that an aeroplane was employed as a weapon of mass destruction, without the use of a bomb. This poses the question of which other kinds

of vehicles could fall into the category of feasible terrorist weapons. Should all these vehicles be monitored and kept under control? Based on the relevant data, analysis (see table 1) regarding vehicular terrorist attacks over the last ten years, it can be concluded that the attacks involving cargo vehicles resulted in a higher percentage of injuries than the other types of previous terrorist methods. The number of injuries and deaths also depends on the way the crime was committed. Perpetrators often combine the attack with other forms of violence, like stabbing or using explosives. An additional factor, such as the size of the crowd targeted, has an influence on the number of victims, but these elements were not included in the chart. The basis of the data collection is the listed terror attacks by two organisations CEP¹ and the TSA². The two organisations will be introduced in a later paragraph.

date	place	equipment	death	injury	combined with
14.07.2016	Nice (France)	truck	86	434	
23.05.2014	Xinjiang (China)	SUV	39	90+	explosives
17.08.2017	Barcelona (Spain)	van	16	120	
19.12.2016	Berlin (Germany)	truck	12	56	
31.10.2017	New York (USA)	truck	8	12	
03.06.2017	London (UK)	van	7	48	stabbing
23.03.2017	London (UK)	SUV	5	50	stabbing
02.07.2008	Jerusalem (Israel)	bulldozer	4	45	
07.04.2017	Stockholm (Sweden)	truck	4	15	
05.11.2014	Jerusalem (Israel)	car	3	13	
20.06.2015	Graz (Austria)	SUV	3	36	stabbing
22.10.2014	Jerusalem (Israel)	car	2	7	
22.05.2013	London (UK)	car	1	0	
04.08.2014	Jerusalem (Israel)	bulldozer	1	5	
20.10.2014	Quebec (Canada)	car	1	1	
22.12.2014	Nantes (France)	car	1	10	
15.04.2015	Jerusalem (Israel)	car	1	1	
13.10.2015	Jerusalem (Israel)	car	1	2	stabbing
03.03.2006	North-Carolina (USA)	SUV	0	9	
30.06.2007	Glasgow airport (UK)	SUV	0	5	
22.07.2008	Jerusalem (Israel)	bulldozer	0	16	

¹ Counter Extremism Project/CEP, (2016): Vehicles as weapons of terror, <https://www.counterextremism.com/vehicles-as-weapons-of-terror> (downloaded: 02.02.2018)

² Transport Security Administration/TSA, (2017): Vehicle Ramming Attacks, <https://info.publicintelligence.net/TSA-VehicleRamming.pdf> (downloaded: 05.02.2018)

22.09.2008	Jerusalem (Israel)	car	0	19	
05.03.2009	Jerusalem (Israel)	bulldozer	0	2	
29.08.2011	Tel-Aviv (Israel)	car	0	9	
21.12.2014	Dijon (France)	car	0	13	
06.03.2015	Jerusalem (Israel)	car	0	5	
26.06.2015	Lyon (France)	van	0	2	
01.01.2016	Valence (France)	car	0	1	
29.09.2016	Wien (Austria)	car	0	0	
28.11.2016	Ohio (USA)	car	0	11	stabbing
23.03.2017	Antwerp (Belgium)	car	0	0	
19.06.2017	London (UK)	car	0	8	
19.06.2017	Paris (France)	car	0	0	
30.09.2017	Edmonton (Canada)	car+truck	0	5	stabbing
17.11.2017	Efrat (Israel)	car	0	2	

Table 1: Vehicular ramming attacks 2006-2017 Source: CEP³ and TSA⁴

The 35 attacks committed since 2006 have resulted in 195 deaths and 962 injuries. Terrorists using passenger cars have not killed anyone in 11 out of 18 cases. It has also been observed that 50% of the incidents involving bulldozers or SUVs have not had a fatal effect either. In short, 16 out of 28 attacks related to non-cargo vehicles resulted in not killing any people, and 62% of those victims were linked to one Chinese case, where explosives were involved. By contrast, higher figures can be observed from terrorists using cargo carriers, such as vans or trucks. There has only been 1 attack out of 7 without fatalities, in all other cases at least 4 people were killed. Attacks that have been conducted by cargo carriers account for 68% (133 people) of all victims, but only 20% of all incidents. Table 1 indicates that this evolving method of attack has only been discovered within the last 3 years by the perpetrators, as the connection between the size of the vehicle and the fatalities is obvious. Further factors seem to denote the usage of trucks, due to the rolling weight, acceleration or the approach angle as described by a terrorist's guide leaflet found online (see figure 2).

³ CEP(2016)

⁴ TSA(2017)



Figure 1: ISIS online training material Source: CEP⁵

This material has been uploaded on the internet, years after the ramming attack in Nice, France. It advocates the same kind of truck, a 19 ton Renault Midlum. Similar vehicles do not attract any attention in French cities, as the local shops and grocers use them for regular deliveries. The leaflet promotes preparation support for terrorists, explaining the most important features and possible ways to acquire the most suitable vehicle. Renting a truck is perhaps the least complicated and risky solution for terrorists, given the fact that no crime has yet been committed and that any security control will allow them to keep driving until an actual attack commences. Herein lays the precise point of difficulty. Terrorist vehicles are not marked with the intention of the driver; hence they are not dissimilar to any others. This factor is highly valid for passenger cars, but as we have just seen, these are less effective than cargo vehicles, which are linked to the world of delivery logistics. Will there be any new terrorist attack using trucks or vans is not really the question, but rather how to decrease the amount of deaths, and if there is any way to present an interdisciplinary defence solution in cooperation with logistics. The pertinence of this topic is underlined by the public appeals for preventing further attacks from ISIS, presented in the online media (see figure3.). The authors of this article are currently working on an initiative and will hereby present a possible info-communicational setup.

⁵ Counter Extremism Project/CEP, (2016): Vehicles as weapons of terror, <https://www.counterextremism.com/vehicles-as-weapons-of-terror> (downloaded: 02.02.2018)

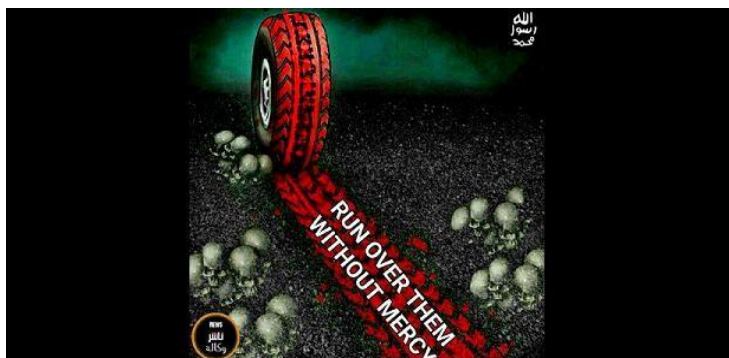


Figure 2: Vehicular attack propaganda Source: CEP⁶

Literature review

Only a small amount science literature pertains to this topic, which predominantly emphasises the timeliness and the origin. Some studies engage in the political aspects of vehicular ramming attacks⁷, respectively the statistical analysis of the phenomena.⁸⁹¹⁰ The newest research findings in network science¹¹¹² have had an impact on the current proposals. The studies related to prevention can be grouped into different orientations. Some of them target developing the trucks technical parameters enabling tracking en route and avoiding penetration into the cabin¹³. The author builds his concept on well-known technologies used in logistics tracking and tracing, such as GPS, immobilisers or a door-opening sensor. Morsi et al. published a study¹⁴, which

⁶ CEP (2016)

⁷ SAHHAR, M. (2017): This is not a truck: Misapprehending terror, recognising resistance [online]. Arena Magazine (Fitzroy, Vic), No.146, Feb 2017: 39-41., <https://search.informit.com.au/documentSummary;dn=710399106415730;res=IELHSS>ISSN: 1039-1010>

⁸ JENKINS, B. M., – BUTTERWORTH, B. R. (2017): Terrorist Vehicle Attacks on Public Surface Transportation Targets. Mineta Transportation Institute, San José State University

⁹ ALMOGY, G. – ASAF KEDAR, A. – BALA, M. (2016): When a vehicle becomes a weapon: intentional vehicular assaults in Israel, Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine 2016;24:149 <https://doi.org/10.1186/s13049-016-0338-9> Published: 28 December 2016

¹⁰ BAK, T. (2017): Manners of Performing Terrorist Attacks, International conference KNOWLEDGE-BASED ORGANIZATION, 23(1), pp. 25-31. doi:10.1515/kbo-2017-0004

¹¹ BARABÁSI, A. L. (2013): Network science. Philosophical Transactions of the Royal Society of London A: Mathematical, Physical and Engineering Sciences, 371(1987), 20120375

¹² ESTÓK, S. (2009): Hálózatközpontú integrált interdiszciplináris logisztika, BOLYAI SZEMLE XVIII: (3) pp.23-33.

¹³ HARVEY, J. M. (2004): The secure networked truck: protecting America's transportation infrastructure, IEEE 60th Vehicular Technology Conference, 2004. VTC2004-Fall. 2004, pp. 5281-5284 Vol. 7. doi: 10.1109/VETEFC.2004.1405109

¹⁴ MORSI, H.F. - YOUSSEF, M.I. - SULTAN, G.F. (2017): Novel Design Based Internet of Things to Counter Lone Wolf Part B: Berlin Attack. International Journal of Mathematical and Computational Methods, 2, 235-242

is very relevant to this article. Additionally, they stressed the technical functionalities of the vehicle and linked it with the physiological monitoring of the driver using a built-in EEG (Electroencephalogram), which can signal changed footings and stop the truck autonomously. Their further proposal is to have the regulations of the Vienna Convention (1968)¹⁵ modified, as the drivers have to maintain full control of the vehicles at any given time. Similar modification would also support the fight against terrorism. As an example, the Advanced Emergency Braking System (AEBS) overruled the driver's instructions and stopped the truck after 70 meters during the Berlin attack. This function could have been deactivated, due to the Convention, but this was presumably unknown by the untrained terrorist. Therefore, an adaptation of an AEBS with no shut-off switch could provide a reliable and effective solution to the current challenges. In this case, trucks would not be able to ram by themselves. Another research orientation is the engineering of obstacles creating temporary physical protection in pedestrian zones^{16 17 18} to help secure the location of mass events. Other researchers have worked on analysing camera footage from surveillance systems in order to recognise dangerously moving vehicles.¹⁹ Two organisations are currently substantially engaged in this topic. One of them is the American TSA (Transport Security Administration), which is a governmental office that came into existence after 9/11, with the primary objective of increasing the security level of air transportation. Since then, their field of operation has extended to any other passenger or cargo transportation modes. TSA recognized the danger of using trucks for terror attacks early enough in 2004. They had signed an agreement with the local carrier's association, 12 years before the tragedy in Nice, in order to train the sector workers for security awareness. Their press release back then²⁰ already contained the goal to *“prevent attacks by teaching highway professionals to avoid becoming a target for terrorists who would use large vehicles or hazardous cargoes as a weapon. A secondary goal is to train highway professionals to recognize and report suspicious activity.”*

TSA titled the topic distinctly as Vehicle Ramming Attack (VRA) in their writing published in May 2017.²¹ The document listed incidents, described the modus operandi and contained preventive actions too. Most of the countermeasures put the emphasis on cooperation and security awareness, including an awareness of

¹⁵ GAR, WP.29 Agreement 1968 Vienna Convention on Road Traffic, <https://globalautoregs.com/rules/157-1968-vienna-convention-on-road-traffic> (downloaded: 22.05.2018)

¹⁶ SHWETSOV, A.V. - SHAROV, V.A. - SHVETSOVA, S.V.- EUR, J. – SECUR, R. (2017): <https://doi.org/10.1007/s41125-017-0018-4>

¹⁷ SWAHLAN, D. J.- WILKE, J. (2012): Vehicle barrier with access delay. U.S. Patent No 8,210,767, 2012.

¹⁸ OMAR T – BEDEWI N.E. – HYLTON T. (2007): Cost-Effective Structural Anti-Ram Security Barriers: New Design, Computer Modeling and Test Validation. ASME. ASME International Mechanical Engineering Congress and Exposition, Volume 16: Transportation Systems ():341-350. doi:10.1115/IMECE2007-41510

¹⁹ HAN, W., – HAN, I. S. (2017): Neuromorphic convolutional recurrent neural network for road safety or safety near the road. International Journal of Circuits and Electronics <http://www.ijce.org/iaras/journals/ijce,2017> vol2

²⁰ Transport Security Administration/TSA, (2004): <https://www.tsa.gov/news/releases/2004/03/23/tsa-teams-american-trucking-associations-prevent-and-respond-terrorism> (downloaded: 05.02.2018)

²¹ TSA(2017)

hitchhikers and reporting suspicious activities to the authorities. There are only a few real action points, such as creating safety zones or using vehicles as roadblocks around mass events. The majority of the initiative has been built on the principle of “*see something, say something*”. TSA’s many years’ efforts did not seem to be effective, as just five months later, in October 2017; Sayullo Saipov rammed 8 people to death in New York. The other relevant organisation is the non-profit CEP (Counter Extremism Project), whose members predominantly comprise American and European known politicians, diplomats and professors aiming to take a united stand against extremists. They engaged in the topic of VRAs in their writing²² dated July 2016, by creating a summary of the incidents and drawing attention to its propagation. In conclusion, CEP denotes that “*there is little that can be done*” and “*it is impossible to prevent all vehicular terrorist attacks*”. They put the emphasis on the prevention of the popularisation of these kinds of attacks, stressing the importance of online platforms such as Youtube, Facebook or Whatsapp or search engines, like Google, in which they discovered the two ISIS items presented here in.

The definition of critical infrastructures

Based on the definition of the European Union; “*the critical infrastructure (CI) includes those physical resources, services, and information technology facilities, networks and infrastructure assets which, if disrupted or destroyed, would have a serious impact on the health, safety, security or economic well-being of Citizens or the effective functioning of governments*”.²³ The Hungarian Green Paper’s definition²⁴, that “*critical infrastructure is understood as interconnected, interactive and mutually interdependent infrastructure elements, establishments, services, systems and process networks crucial from the country’s (population, economy and government) actuation point of view and have a substantive role to maintain a socially expected minimum level of legal certainty, public security, national security, economical operability, public sanitation and environmental condition.*” Based on the above, in Hungary “*those networks, resources, services products, physical and information technological systems, equipment and their elements are considered as critical infrastructure, which operational malfunction, disruption, elimination or destruction would directly or indirectly have a severe temporary or long term impact on the citizens’ economic and social welfare, public sanitation, national security, national economy and the operation of the government*”. According to the National Directorate General for Disaster Management, the general term is defined as “*critical infrastructures are those domestic organisations, infrastructures, infrastructure systems, networks or their elements establishing the population’s mental and material life conditions, enabling or contributing to the economic operation, which destruction,*

²² CEP(2016)

²³ Green Paper, EU, <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52005DC0576&qid=1526982048015&from=EN> (downloaded: 22.05.2018)

²⁴ 2080/2008. (VI. 30.) kormányhatározat a Kritikus Infrastruktúra Védelem Nemzeti Programjáról, 1. sz. melléklet – Zöld Könyv a kritikus infrastruktúrák védelmére vonatkozó nemzeti programról

decreased level of their services or their availability would negatively affect certain users or users' group's existence and operational conditions"²⁵

All the authors agree that transportation and delivery is determinant in the classification of CIs. The question presents itself; whether a cargo vehicle can be interpreted as a CI or not? Taking these definitions literally, it is not the case, but in a broader sense, if trucks are considered as elements of the supply system's distribution network, the answer should be yes. Disruption or severe derangement of the vehicle's network may affect the user's life conditions negatively. It is easy to concede that commercial units cannot provide the resident population with consumables without having supplied them. Additionally, in view of this article, the network of vehicles indicates a more direct threat to the lives of end-users. Delivery logistics and its attributes are linked via multiple touchpoints to the defence of the critical infrastructures, firstly in the traditional way where infrastructures must be defended from damage caused by vehicles and secondly, in a newly defined approach, where the vehicles must be defended to avoid harmful usage. Controlling a truck would not necessarily lead to the identification of the perpetrator, as was experienced in Nice or New York, as the crime was committed by rental trucks. Consequently, everything appeared legal until the first people were rammed. In consideration of the above, we propose an extended definition of critical infrastructure. *Those networks, resources, services products, physical and information technological systems, equipment and their elements are considered as critical infrastructure, whose operational malfunction, disruption, elimination, destruction or destruction would directly or indirectly have a severe temporary or long term impact on the citizens' economic and social welfare, public sanitation, national security, national economy and the operation of the government.*

The relationship between delivery logistics and critical infrastructures (CI)

The disposition of cargo vehicles is a delivery logistics task, which can identify if the given truck has an actual delivery at a certain place. Delivery logistics can support mass events and CI's security and safety by the tracking and organisation of vehicles. Connecting shipment data with trucks would serve as a first level filter in CI's defence organisation. The planning of delivery routes should consider avoiding security zones. However, entrance may not be avoidable; therefore an increased security protocol would apply. There are more solutions to monitoring deviations from the route or recognising suspicious movement. For example, when a driver's phone signal moves gratuitously far from the truck's GPS coordinates or either signal gets lost. In such cases, an early recognition of the situation and rapid identification of the driver is crucial. This can happen effortlessly in the era of smart equipment by shooting a photo or using a fingerprint reader. Additionally, there is a need for a 24-hour, central dispatch, which monitors the incoming information and is entitled to act. The system cannot work without mutually accepted conditions on a minimally required technical level and behaviour. Carriers accepting an order to a certain city have to prove their willingness by participating in the respective training, equipping

²⁵ Országos Katasztrófavédelmi Főigazgatóság/ OKF, (2018): A kritikus infrastruktúra, http://www.katasztrofavedelem.hu/index2.php?pageid=lrl_index (downloaded: 05.02.2018.)

their vehicles with the required technical tools and establishing a GPS connection in order to enter the system. The fulfilment of these requirements should be audited and registered into a dynamic database. In conclusion, connecting vehicles with shipment information is the first priority. EKAER (Electronic Public Road Trade Control System) has been introduced in Hungary in order *“to strengthen the market positions of compliant economic operators, to make circulation of goods more transparent, to eliminate fraud related to food products often endangering human health and; last but not least, to eliminate tax evaders”*.²⁶ EKAER contains a database covering the requirements of current study, as it has to fulfil the expectation of the authorities related to 100% identification of shipments, linked to trucks at a certain time and place, defining weight, consignee and cargo description. In Hungary, it is an evident solution to combine the EKAER database with the trucks' GPS signals. The database of registered and audited carriers can easily be linked to the actual shipment data and their optimal routing, revealing which vehicles may cross the security zones of mass events or critical infrastructures. The authorities' permission procedures of mass events should consider such information, and truck route planners should also be pre-warned respectively to avoid or postpone shipments to actual zones or consider detouring vehicles as much as possible.

Truckspotting

VRA defences are largely based on the observation of vehicle movements. What is going to happen to trucks entering the security zone, which are not part of the regime? Who and how will we spot them? In the current concept, the resident population would be playfully involved, referred to the activity as truck spotting or truck hunting. A mobile application (see figure 3) allows the user to check whether the truck crossing their way is a duly organised freighter, by taking a photo of its license plate number. The system would run a validation procedure in the background, checking the actual shipments linked to the plate number. In the case of validated freight route and position, the user gets a green signal and the system would store the captured data for a short timeframe, otherwise, the system alerts the central dispatch triggering an emergency protocol. The operator can decide on the emergency level indicative of the incoming information, comprising location and image analysis. If the operator decides to activate the alarm, users in the area would get a push notification alerting them of the danger, while the authorities are being informed. Following an alert, users may keep taking pictures of the infiltrator providing subsequent GPS coordinates and images, while at the same time, getting out of harm's way and the authorities intervening. The application acts as a tracking and tracing system and a disaster or terror alert device. The central security should be able to rely on any further sources, such as images from deployed traffic cameras and outside surveillance systems too.

²⁶ NAV, online: <https://ekaer.nav.gov.hu> (downloaded: 22.05.2018)

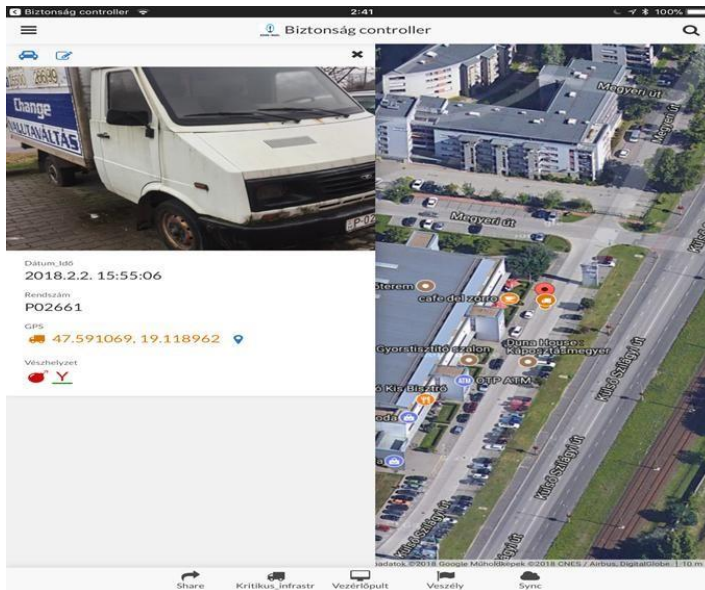


Figure 3: Truckspotting application (Source: own edition)

Conclusions and proposals

The correlations of a security science area, consisting of the vehicular ramming terrorist attacks have been revealed in this article, as predicting the increasing number of incidents committed by cargo vehicles. Defence studies have indicated several orientations, but those are not very suitable for providing a fulltime, failsafe security scope. The attached comparative table consists of the current main research areas, explaining the advantages and limitations of each (see table 2).

Description	Advantages	Disadvantages
Deployment of physical objects	<ol style="list-style-type: none"> 1. Obstruction of trucks from entering the area. 2. No info- communication necessary. 3. Deployment and redeployment is quick and easy. 4. One time investment and low running cost. 	<ol style="list-style-type: none"> 1. Obstruction of rescue vehicles 2. Obstruction of resident population and their supply. 3. Not a solution for protection of spontaneously formed or moving mass.
Vehicles security tool development	<ol style="list-style-type: none"> 1. Prevent modus operandi including truck robbery 2. Enable tracking 3. Automated alarming function feasible. 	<ol style="list-style-type: none"> 1. Not a comprehensive solution. Prevents one type of modus operandi only, limited to equipped trucks.

Development of Advanced Emergency Braking System (AEBS)	<ol style="list-style-type: none"> 1. Truck will stop autonomously to avoid collision minimising loss. 2. Independence from the drivers intention. 	<ol style="list-style-type: none"> 1. It is mandatory to enable the switch-off of the function. 2. Earlier truck types are not equipped with AEBS. 3. It can be disabled in other ways. 4. Does not protect during stopping-distance.
Physiological monitoring of the driver	<ol style="list-style-type: none"> 1. Independence from the drivers intention. 2. Effective in case of sudden health issues. 	<ol style="list-style-type: none"> 1. It is difficult to equip all trucks with EEG. 2. Does not protect during stopping-distance.
Development of security awareness	<ol style="list-style-type: none"> 1. Makes difficult for suspects to mingle and execute a terror incident. 	<ol style="list-style-type: none"> 1. It is not a comprehensive solution. Protects trained people only. 2. It is not possible to train everybody. 3. The willingness for cooperation, vigilance and sensitivity regarding the topic may be different.
Control of online terrorist content	<ol style="list-style-type: none"> 1. Hinders training, distributing and easily adapting certain modus operandis. 	<ol style="list-style-type: none"> 1. Difficult to observe all online contents. 2. Only for prevention, not for protection.
Complex info-communicational security network	<ol style="list-style-type: none"> 1. Considers all vehicles. 2. Involves population decreasing the sentiment of helplessness 3. Provides support in organisation of mass events. 4. Does not obstruct the movement of the vehicles. 5. Enables fast recognition. 6. Alarm function can be used in case of emergency. 	<ol style="list-style-type: none"> 1. It is difficult to join the system. 2. Requires broad cooperation. 3. Obstructs the unregistered vehicles. 4. Population may panic in case of emergency.

Table 2: Comparison of the research orientations (Source: own edition)

The solution presented by the authors also has its limitations, as it can only be implemented effectively through a broad cooperation among the members of law enforcement authorities, delivery logistics and the resident population. Further restriction is that the EKÁER should be extended to all vehicle types, such as, communal, construction or moving service trucks. Additionally, registering and auditing a vehicle can create a time constraint too. The created network centric info-communicational security and safety system should be operated by the state, considering the following proposals:

- Creating safety and security zones around the fixed CIs;
- Establishing dynamic safety and security zones around mass events;
- Connecting the GPS signals of the cargo vehicles entering the critical areas to a central dispatch;

- Forwarding the images of deployed surveillance and traffic cameras to the central dispatch;
- Limiting the entrance of vehicles outside the regime into the operating area;
- Creating and training of special protocol, valid for vehicles entering the operating area;
- Extending EKÁER to all shipments assigned to the operating area;
- Training users and the market in the usage of truck spotting application.

Delivery logistics will create a smart platform to cooperate with the citizens, who feel rightly powerless against this kind of terror threat. The usage of the truck hunter application may decrease this sentiment. Additionally, the population could be alerted in case of any terror attacks or disastrous situations, getting them out of harm's way with precise and pertinent advice. The assumption – that a defensive smart system, created in cooperation with law enforcement authorities, logistics providers and the resident population, potentially decreasing the number of fatal attacks – has been proved and is seen as a possible way to structure defence and protection.

It is a very important conclusion that vehicles were defined as pieces of equipment in the past. In the current approach, the network of freighters has become a CI as well, which must be protected, not only due to their role in the supply chain, but also for their ability to destroy. Consequently, the authors have proposed to extend the definition of CI.

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**INDUSTRY 4.0 AND ITS RISKS IN THE STATE ADMINISTRATION,
CORPORATE AND MEDICAL SECTORS**

Abstract

With Industry 4.0 many new method, robotic approaches, autonomous transport features, and a rather complex ICT infrastructure have been introduced. Its effects, developments and results are present everywhere: in mobile networks and supercomputers, in their complete communication capabilities, in artificial intelligent driven robots, smart offices, and even in newly built smart homes. Autonomous cars, robotic-controlled aircraft and transport technology are revamped in the mass transport as well as in the military field. The 21st century technology- renewal not only brought shorter manufacturing time but also enabled real-time data management and tremendous amount of risks in the real and cyber space too thanks to this overall connectivity. Medicine seeks to catch up at the same pace as computing, not only with neurological and brain-technological developments, but with genetic engineering, portable devices, sensor equipped medical accessories.

Corporations, business entities, the research sectors and governments are introducing robust security practices on many different levels, such as against internet hacking and cyber-attacks as well as protecting their facilities and their staff.

The aim of the paper to synthesize the main characteristics of the new challenges, with focus on government and different business sectors. Based on secondary data, I used content analysis and desk research.

Keywords: Industry 4.0, security practices in the government sector, data protection in the medical field, Internet of Things

1. The general characteristics of the Industry 4.0 and the previous industrial revolutions

1.1

The first industrial revolution marked by the change from agriculture to industry driven societies in the 18th and early 19th centuries. The small home workshops were being replaced by mechanization. The rapid development of coal mining and the discovery of steam engines accelerated the economic growth and a new type of energy usage. By building the railroad system trade started to shape and eventually drew the blueprint of industrial centers as we know them today.

Almost a century later a new discovery shaped the industrial world: electricity, as well as gas and oil. It resulted in a brand new industrial model with mass production and exploration of synthetic fabrics, fertilizers and dyes. The communication has been revamped by introducing the telegraph and the telephone. In the transportation field the first automobiles and airplanes have emerged. (Some in the early 20th century). New large factories have been built centralizing the research and production industry such as Taylor and Ford.

In the second half of the 20th century once again a new development shook the known world, what surpassed its predecessors: the discovery of nuclear energy. With it the electronic industry continued to advance, so the transistor first, later the microprocessor have appeared, followed by the telecommunication devices and computers. New researches have begun into space and biotechnology alongside with the production of miniaturized appliances. This third revolution also brought the era of high-level automation and robots.

Industry 4.0 built on the third, which basically called the digital revolution, yet the fourth cannot simply be considered as the continuation of it. The speed of changes exponentially grows and brings together digital, physical and biological systems, while at the same time changes us, humans as well. It will uproot existing industries all over the world. The Internet of Things modifies everything from production to private life and enables us to see a new virtual world as well. Cloud technology and Big Data Analytics pave the way to the fast developments in the related research fields. Industry 4.0 will be the crossroads for all-connected global system. It will transform our lives, workplaces and our relations to the entire globe. Roughly 30% of the present jobs will disappear while many new come into the job market, unimaginable today. In the company of the future the most sought after skills will be technology related and with reference to the World Economic Forum's latest prognosis there will be a huge demand for creativity, emotional intelligence, critical thinking and people management skills, as the ultimate player in Industry 4.0 still humanity.(10)

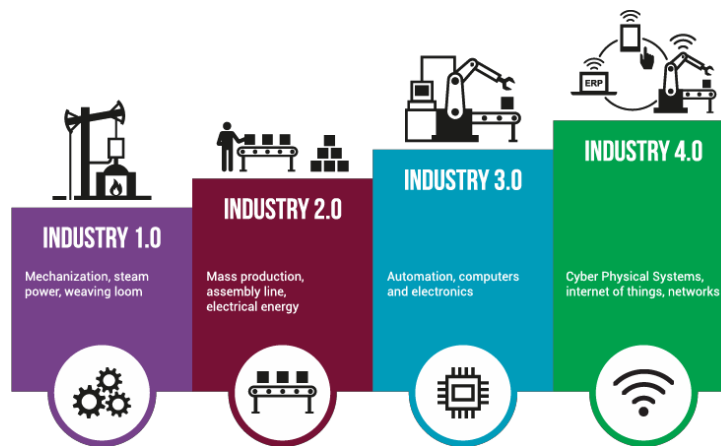


Figure 1¹

1.2.

Based on this knowledge we need a brand new economic model and a change in the old system too. Although the name indicates the Industry 4.0 is mainly for manufacturing and production, it is clear by now that it will expand into other fields, such as transportation, logistics, health care and governments, further to the point it will be global. Its main characteristics include big data, analytics, Internet of Things,

¹ <https://www.simio.com/applications/industry-40/industry-40.png>, Industrial Revolutions (retrieved on August 2018)

sensors, robots, artificial intelligence and digital supply chain. It also brings a connected environment of people, systems, production and services. Industry 4.0 also gives us many new methods, novel approaches, modified framework, rapid change of paradigms and a rather complex ICT infrastructure. The effects and results of Industry 4.0 are present everywhere: in mobile applications and supercomputers, in their communication capabilities, in intelligent robots, smart offices, and newly built smart homes. Our life in general is supported by Artificial Intelligence (AI). The transport technology is revamped: autonomous cars, robotic- controlled aircraft and product manufacturing robots are the case of point.(6)

1.3.

The 21st century technology-renewal not only shortens manufacturing time but also enable real-time data management. Medicine seeks to catch up at the same pace as computing, not only with neurological and brain-technological developments, but with genetic engineering change. All of these changes require fairly new implementations not only industry – wide, but in the government and social sectors as well. State administrations should be ready and cope with these changes too. They have to have a common platform with the civil society and cooperate with global major business players as well.(10)

1.4.

Like any new methods Industry 4.0 also taught us that the connection between humans, systems and objects has become more intricate, dynamic and a real-time optimized network. Thanks to this connectivity is likely to generate and measure information by creating a smart cloud system for predictive and automated decision-making by using artificial intelligence. Corporations, manufacturing entities, the research sectors and governments are introducing robust security practices on many different levels, such as against internet hacking and cyber-attacks as well as protecting their facilities and their staff. (5)

2. Defining Industry 4.0

2.1.

Industry 4.0 has many aspects, consequently defining from different points give equally numerous explanations. The European Parliament has its own: “Industry 4.0 is a term applied to a group of rapid transformations in the design, manufacture, operations and service of manufacturing system and products. The Industry 4.0 designation signifies that this is the world’s fourth industrial revolution that...caused quantum leaps in productivity and changed the lives of people throughout the world.”

2.2.

Zoltán Cséfalvay the Hungarian ambassador to the OECD, one of the most noted Hungarian expert in Industry 4.0 says, that using bio robotics, personalized medicines and the most effective treatments, based on individual characteristics comes with the revolution, so are the nursing robots. With this new system enormous medical data will be created. Robots will be also built with artificial intelligence that will be

optimized for economic efficiency, basically for the majority of repetitive or low-skilled jobs. He talks about "tectonic shifts" that happen at exponential speed. The expense of surviving it, is that companies, manufacturers and systems must adopt quickly to the changes outlined above and learn about the challenges. Introducing the adequate education and providing the most relevant skills to learn or to be able to gain the most relevant knowledge. He adds that to complete Industry 4.0 there are three basic requirements, such as investments, skills and social adaptability. Furthermore by lowering the prices SMEs will be able to participate in this transformation.(9)

2.3

“Klaus Schwab, a prominent researcher at Industry 4.0, puts the most recent changes into a historical context, outlines the most important technologies of the revolution, discusses the major implications for governments, businesses, civil societies and individuals, and suggests ways of responding. At the heart of its analysis, the conviction is that the fourth industrial revolution is under our control, as long as we are able to live with these newly created opportunities. Schwab, above all, calls on leaders and citizens to "shape a future for everyone who places people in the forefront and reminds them that these new technologies can become important and helpful tools for people. “ (World Economic Forum April 2017)

As a result of this inherently unique paradigm, not only developments and achievements, but also disturbances can arise, which means that we live in a duality of great promise and great danger. The world has the potential to link billions of people to digital networks, dramatically improve the efficiency of organizations, and handle assets in ways that can help revitalize the natural environment. This can reduce or even eliminate the adverse effects of previous industrial revolutions.

There are researchers who raise legitimate doubts that there will be organizations that cannot or do not want to adapt to newly emerging technological and industrial trends, as well as governments that do not know and want to apply and control new technologies, to benefit from them. Any change of power can bring new security concerns at the same time socio-economic inequalities may arise.(8)

2.4.

Whether we accept all these technical changes and trying to adapt them or not the ultimate and most empowering player in this revolution are the people themselves and their values. Yes, there is an unprecedented fear that technology takes away what makes us all humans, and robotizes our hearts, souls, emotions and faiths. However I am also a big believer that the same technology will be able to give us and ever great opportunity for unified creativity, cooperation and empathy for sharing all of these innovations and advancements Industry 4.0 can offer us.

3. Development and danger of the medical sector in Industry4.0

3.1

Industry 4.0 will revolutionize the products and services of the pharmaceutical & biotechnology sector by leaps and bounds. This is due to the fact that basic data on molecular structure, physical and chemical properties, stability data, in vitro & in vivo

behavior becomes available for digitally transformed and physically progressive systems. Personalized medicines are the next step in healthcare. Future drugs will depend on body fat, muscle weight, bone mass and also on the DNA structure, so the treatment of rare diseases can also be successfully treated. The time required to approve medicines will result in accelerated production processes, just as digital transformation, where system information and advanced molecular studies together can bring positive changes to most areas of health. Digital conversion opens the door to 3D print medicines, genetic re-design, portable devices, and individualized hormone therapy. In the event of an outbreak of epidemics, it will be possible to detect it in a very short time before it is effecting the larger masses.

3.2

This huge amount of stored data requires a well implemented security system too, since the risks of data security increase naturally; not only in the field of research, where results already achieved, but also in the personal patient data management. Avoiding misuse of these data is one of the major task. Security forces have changed in the last 6-8 years. Data sources available from individuals can easily be combined with financial accounts and other personal information (habits, addresses, workplace etc.). The acceptance of digital technologies and the explosive growth of connected devices have paved the way for new forms of data theft. The attack motivation does not need to have any special intent, computer warfare, financial gain or even retaliation against a particular person. (3)The strongest motivation of healthcare attacks is the financial value of information. Health care has the highest per capita cost. The average rate of data breaches in the health care organization can be estimated over \$ 2.1 million due to losing litigation and compensation cases. The number of crimes in the medical identity thefts also grows because the stolen medical identities make it possible for the criminals not only to get an accurate picture of the patient's condition, but with that information can mislead future employers as well. Fraud is a complex problem that has cost the United States Government over the last two years alone up to \$ 6 billion for Medicare (insurance company).

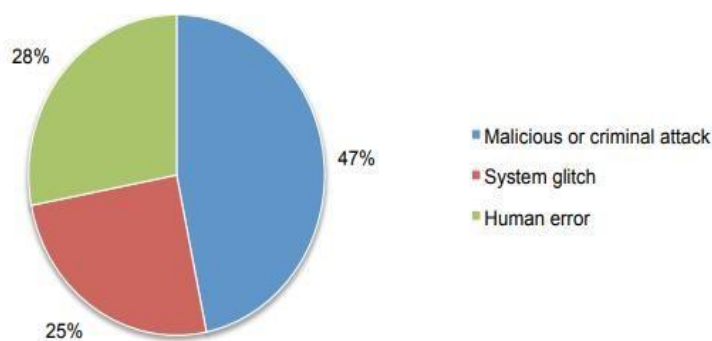


Figure 1: Pie Chart of distribution of the benchmark sample by root cause of the data breach

3.3

The medical and technological advancement will bring other challenges for the governments to deal with. While the results in the pharmaceutical industry are rather progressive, their risk – in the form of biological weapons for military use – cannot be ignored. Since the related technologies are advancing faster than ever before, some scientist suggesting to call our time “the century of biology”. The gained knowledge is not only science-wide, but deep as well. Once these discoveries are being used or are put in practice, they can call for real security measure. It is more likely also that government, in the present forms will have less control over the scientific and technological production, yet the ethical issues as well as the safety and security responsibility and relevant policy-making will highly rely on them. To continue the above thought, new discoveries will bring new risks for instant in chronic diseases, whether they occur as a misfortunate epidemic or by a “deliberate misuse” for political or financial greed. Consequently all governments should be prepared how successfully deal with a so-called bioterrorism act.

3.4

Further deepens the problem that the world slowly becomes one global player – above governments – and all those scientific laboratories and institutions – naturally – can be and will be located anywhere. Less developed countries are investing heavily into biotechnology, hoping for future financial gain out of it. This rapidly changing scientific and biological landscape has an immense implication on security. They can and change the way how threat and responding security measure will shape our future. The combined biological – cyber and physical (weapon) – threat gives governments an ever increasing problem, how to meet these global, often unexpected provocations. The effective way to treat such challenges would be, if state administrations while implementing old methods will be ready to accept the newest ones to create a usable framework for security. It will also be very important to cooperate with multiple partners. Exclusively governments might not be able to deal with biological weapons and threats alone, neither to keep up with scientific developments. It basically means that governments should work together with scientific communities, universities or industries and the private sector, where many assets against biological threats might be found. So not only new approaches, but new partners are required for all stakeholders in this field. As far as present data is available, these threats should not be treated as a problem to security, rather as a real risk to be managed.

4. Risks and tasks of state administrations in the fourth industrial revolution

4.1.

Industry 4.0 and the relevant innovations have changed the governments’ policies, rules and regulations in the past couple of years. The speed at what data is being generated is unrepresented. Managing it effectively is one of the challenges. Part of the global data belongs to governments, disputing further the issue who owns data, who should ensure quality, privacy and security? “Data is being the new oil” represent new shift how to handle it: to extract, channel and carry it to the right places can have

an undeniable impact on decisions and altering the way we live. Governments' role will be to stand by, curating and protecting this very valuable asset. State administration should set first a legal framework and design a modern data management model. All government at some point must improve citizen- involvement with decision-making and policies.

4.2.

The Fourth Industrial Revolution makes to face governments with both good and bad news. Keeping sensitive data up-to-date requires a system of defense. That needs to be consciously and proactively guarded as the security limits around secure information are less flexible than mobile computing users' capabilities to breach this data. Information is critical, because it is directly related to the states and/or individuals, so its importance is paramount. Security must relate both to the nature of the threat and to the actual data to be protected. Interaction between security systems requires the understanding of possible threats and likely attack areas. (It is necessary to use defense and countermeasure at the same time)(8)

4.3.

Industry 4.0, also assists governments in creating an open, flexible, knowledge- and skill-based economy, promotes trade outside of the traditional trade blocs, improves the efficiency of health and social care systems while at the same time seeking "protection and security" for those sectors, which use the most advanced technologies. But there is another side of Industry 4.0, namely that governments are increasingly struggling with corporations and organizations that are global behemoths reaching over the continents and their activities – such as exploiting raw materials, imposing taxes, building global networks – are not related to only one country, so regulating it might not be single-handedly managed. (8)

4.4.

Citizens living independently or in smaller interconnected communities increasingly use technology to acquire even greater autonomy. This fact might also affects the supervisory role of governments and institutions. For example, blockchain technology (an algorithm and its distributed data structure with which people interact with and able to handle electronic money, wire or transfer without any centralized administration and further can facilitate a new approach to banking and personal finance. People may choose to trade in non-official currencies, like bitcoins rather than currencies validated by central banks. Renewable energy can erode people's dependence on the power supply of the national network, as developing countries joining "straight to the mobile" largely bypassing the wireline section of telecommunications so that people and groups can "go directly to the grid" to their local energy supply . Skilled and less skilled people seek to develop technology and communication systems that are independent of global telecommunications giants.(8)

4.5.

If government agencies are too slow to adapt to the new technologies, they cannot achieve efficiency needed to maintain public services. The tech savvy population has

no patience for slow and less predictable public services. If the disturbing effects of technology are too long or too slow or if governments cannot modernize them, the decrease in employment and the possible financial inequalities can lead to serious social unrest - especially if the middle class with the interest of retaining the status quo work against them. (9)

4.6.

As with the 2008-2011 financial crisis, the initial unfavorable effects of unemployment, innovation that has changed in industry may further heighten a possible latent crisis. To overcome these impacts, most governments and societies it must focus on education and training. (9)The already existing and trained staff acquire newer technical competencies required by the job markets. This enables to expand the service sector and to ensure for the knowledge-based growing generation a more secure working environment. In addition, it provides ethical robots with the ability to work on further developments along with us, humans.

5. Security Challenges in the corporate and manufacturing sectors

5.1.

The spread of the Internet of Things and the adoption of industrial internet projects forced security professionals to re-evaluate the risks and vulnerabilities of systems around the world. IoT and cyber security complement each other with a number of existing security disciplines.

These disciplines are:

- 1) Information technology (IT security) for the protection of information systems;
- 2) Physical security for the protection of buildings, offices, facilities and critical infrastructures;
- 3) Operational Technology (OT) Security to protect environmental surveillance systems.

5.2.

Unfortunately, it is not unusual for new technologies to be marketed without reliable security features. Understandably it may take some time to develop a sophisticated security supporting technology. Security specialists and organizations with sound information - security capabilities have recognized that the security of IoT and Industry 4.0 requires much more than traditional technical security checks. There is not as of yet an accepted at least EU-wide security standard, nor good enough policies to force manufacturing companies to supply their products with suitable security updates. Protecting business investments and other digital assets need multi-layered protection for business strategy, human exposure, processes, and technology guarding. (5)The digital conversion strategy should allow organizations to adapt these structures and ensure growth, to be ready for Industry 4.0. Companies should also address the need to store large amounts of critical data in the cloud. Thus, the data security strategy should be designed not only to the level of the current, but also to the

future businesses to be planned and to the relevant threats. It must ensure free flow of information so that confidential data cannot be compromised during this process because loss of trust may result in further damage; such as manipulating customer data, business secrets or intellectual property loss.(2)

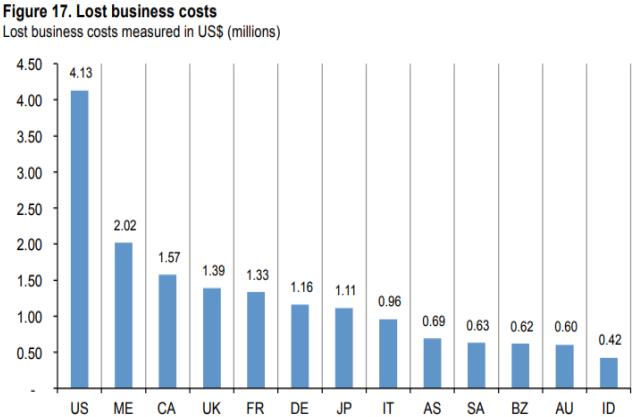


Figure 2: U.S. organizations pay the highest price for losing customers after a data breach

5.3.

In this chapter I also would like to introduce some new ideas about cutting edge robots to be used for military applications, not exclusively in the manufacturing industry. Robots have been developed with multiple legs to be able to walk and scan rugged terrain, rough surfaces and uneven mountainous lands. There is also a need for climbing robots. In earlier research the main focus was on adhesion. The necessary force to cling on was provided by using magnets, suction According to Figure 17, the cost of lost business was particularly high for U.S. organizations (\$4.13 million). This cost component includes the abnormal turnover of customers, increased customer acquisition activities, reputation losses and diminished goodwill. (2017 Cost of Data Breach Study Global Overview Benchmark research sponsored by IBM Security Independently conducted by Ponemon Institute LLC June 2017 or even sticky tapes, In Industry 4.0 the aim has shifted to a new approach: how to control adhesion and balancing with gravity.

A fairly new type of robots, the OctArm are also gaining a share amongst robots. The most advanced feature of those is their capabilities for not only picking up something, but by encircling it to lift easier. Autonomous robots and objects will have an unpredictable impact on national security, as they can be controlled anonymously and from decentralized locations.

Research has already deepened about detecting deception. The key problems with older machines were that trained professionals and even seriously sick and mentally unbalanced persons were able to beat the system. However with the newest neuroimaging system, which is a more precise one, airports, borders, critical infrastructures can be better guarded.

Military has always been the pioneer in implementing emerging technologies, methods and elements. So exploiting the full potential of Artificial Intelligence in the military context and engaging them into proper decision-making can be the next

revolutionary advantage in Industry 4.0. To entirely integrate AI requires an increased trust in their ability to act without human interaction. AI – in general – has limitless memory, complete lack of emotional involvements and also analytical capabilities. Consequently AI integrated machine will be able to make decisions and/or come to a conclusion more accurately than the human brain would. However their greatest disadvantages are the inability to interpret data differently, explore alternative options or reconfigure situations, what the human brain explicitly can.

5.4.

Some of the studies on this subject deal with people responsible for security implementations at state level administration and at corporate entities. When asked about a number of Chief Security Officers about what were they most concerned about, three major issues were raised: first was the safety of workers and their jobs. Their responses reveal that the main difficulty is the need to create security at all levels, but also creating an environmentally friendly workplace. In addition, it is necessary to use a variety of security systems (video cameras, security guards, etc.), but their proper operation ensured only if there is a responding training of employees in these areas. Further to the point it is a must to direct and to participate in identification of security protection and monitoring as well as to prepare for an incident response.

5.5.

The second biggest challenge is the cyber defense and the separable frame for this purpose. The key priority of every company is to protect its system against cyber-attacks that may even force multinational companies to kneel. By allowing most of the applications and devices in use to communicate with each other and to carry, process and transmit information, it is necessary to develop security systems that can protect these, as well as data stored in cloud systems. Further to the point it is utmost importance to provide office-wide information security compliance, to set vulnerability management and to oversee not only the computer emergency response team's work, but the security remediation program to respond threats caused by external sources: natural and man-made disasters and the ability to have the capability of a digital forensic investigation, when necessary.

5.6.

The third largest group, according to the respondents, is the integration. By merging the data of different departments, groups, communicating with one another and exchanging information within the workplace, which cannot leak even if the employee is dismissed. Necessary to establish chain-of-trust agreements and also provide a effective management of security vendor contracts. (That information considered to be design elements, manufacturing technologies, critical infrastructure, or a person, etc.). All these threats you need to create a system where both employers and employees, visitors and business partners can feel safe.

6. Conclusion

It is still early, but so far the 21st century has seen an explosive change in digital and physical devices and their connections. This new era has also – as a result – created novel problems with security. As we became more advanced, we are forced to establish even more sophisticated devices to protect our world. We came a long way: from the first industrial revolution, when steam engines have been introduced to the fourth, where robots are communicating while working together with us, humans. As Klaus Schwab puts it:

“The fundamental and global nature of this revolution means it will affect and be influenced by all countries, economies, sectors and people. It is, therefore, critical that we invest attention and energy in multi-stakeholder cooperation across academic, social, political, national and industry boundaries. These interactions and collaborations are needed to create positive, common and hope-filled narratives, enabling individuals and groups from all parts of the world to participate in, and benefit from, the ongoing transformations.” (Klaus Schwab: The Fourth Industrial Revolution)

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