# NATIONAL SECURITY REVIEW

BUDAPEST

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**THE ROOT CAUSES OF TERRORISM IN THE MUSLIM WORLD**

*Abstract*

The Muslim world, particularly the MENA region, is labelled by the proliferation of terrorism in particular after the September 11 attacks. This paper tries to investigate the causes of this phenomenon by examining it from three different angles: the religious aspect; the reliability of conspiracy theories around this topic; and the political and socio-economic dimension. The first two factors have a minimum effect, and cannot have ground without the existence of the political and socio-economic factors. The main conclusions that monarchial systems are more resilient to terrorism; secondly, the youth explosion in these states as it does not fit with their economic growth is a tic-tac bomb that is going to explode in the future; finally is that terrorism is a consequence of political and socio-economic failures in these states. The main recommendations are that Muslim states need more political reforms in their systems to ensure more public participation, stricter rules against corruption, better wealth distribution. The alternative is a looming wave of social movements that sweep throughout these counties is expected.

*Keywords*: terrorism, Middle East, MENA, fertility, counterterrorism, causes of terrorism

## 1. Introduction

Terrorism has its impact on the life of millions of people affected by this phenomenon, e.g., the economic impact in 2017 was estimated at around 52 billion US $.[1]

Terrorism started from the French revolution to take a facet of modern secular politics associated with anarchism, social revolutionism, and nationalism. Since September 11 terrorist attacks, terrorism started to have pejorative connotations with the Islamic world, afterward many terroristic incidents committed by the name of Muslims wreaked havoc across the globe; these actions alongside floods of immigrants created waves of widespread Islamophobia through the Western countries.

Majority of Muslims despise these actions committed to the name of their cherished faith chose denial tactics rather than to tackle the empirical data about the size of the terror groups live and work in their backyard.

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[1] Global Terrorism Index 2018. Measuring the impact of terrorism; Institute for Economics & Peace, Sydney, November 2018. p. 4. http://visionofhumanity.org/reports (downloaded 01 December 2019)

This research questions the factors that led to the existence and proliferation of terrorism amongst the Muslim world, especially in the MENA region.

The main conclusions are that the political environment is the main reason and that monarchies are harder than republics to be affected by terrorism; thirdly is that the high growth of the young population combined with slow economic growth precipitate them either for terrorism or to engage in criminal activities.

There are multiple definitions for terrorism, yet still no universally agreed upon, this paper adopts the following one: *"Politically motivated violence carried out by sub-state actors against noncombatants to influence a wider audience".*[2] Global Terrorism Index (GTI) defines terrorism by *"the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation"*[3], NATO defines terrorism by *"The unlawful use or threatened use of force or violence, instilling fear and terror, against individuals or property in an attempt to coerce or intimidate governments or societies, or to gain control over a population, to achieve political, religious or ideological objectives"*[4] most of these definitions share the that terrorism targets non-combatants, weapon of the weak, politically motivated to influence and instill fear among citizens.

Insurgency differs from terrorism by objectives: revolutionist insurgency aspire to topple political regimes; reformist insurgency tries to compel governments to introduce reforms and alter policies; separatist seeks to secede definite part from the state; resistance insurgency to force an occupying power to withdraw, the last type of insurgencies is commercialist which is interested in wealth distribution.[5] Labeling a group 'terrorist' versus 'insurgent' provides a very different context for understanding it and addressing it in a global context. In the most straightforward form, insurgencies can be understood as grassroots uprisings that emerge intending to overthrow the established government or set of societal norms that they feel threatened by.[6] Another definition to insurgency suggested by US Marine Corps is that insurgency is *"an organized movement aimed at the overthrow of a constituted government through the use of subversion or armed conflict."*[7] The terrorist group, as suggested by Libcki (2008), is *"a collection of individuals belonging to the non-state entity that uses terrorism to achieve its objectives, with a command and control apparatus, no matter how loose or flexible, provides an overall organizational framework and strategic direction."* It is unlikely that the international community will agree on a unified definition of terrorism as the current situation gives the states more freedom to have their definitions of this phenomenon, the main obstacles to define it is to include the state actor or not, other than that is whether the target noncombatants or civilians,

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[2]   SANDLER, Todd: The analytical study of Terrorism; Journal of Peace Research, 2013. https://doi.org/10.1177/0022343313491277 (downloaded 10 March 2020)
[3]   . GTI 2018. op. cit. p. 6
[4]   NATO Countering Terrorism, 2019. https://www.nato.int/cps/en/natohq/topics_77646.htm (downloaded 10 March 2020)
[5]   CIA: Guide to the Analysis of Insurgency, 2012.
[6]   UNDERHILL, Natasha: Countering Terrorism and Insurgency; Palgrave Macmillan, London, 2014.
[7]   Marine Corps Warfighting Publication FM 3-24, Counterinsurgency 3-33.5; University of Chicago Press, Chicago, 2007. paragraph 1-2, 2.

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whether civilians serving military reserve legitimate targets or not, another issue is whether national liberation movements should be excluded from the scope of application.

## 1.1 *Relationship between terrorism and the Muslim World*

The 20 states most impacted by terrorism in 2017 according to Global Terrorism Index (GTI) sorted according to their rankings are: Iraq in the first place followed by Afghanistan, Nigeria, Syria, Pakistan, Somalia, India, Egypt, Philippines, Democratic Republic of Congo (DRC), Libya, South Sudan, Central African Republic (CAR), Cameron, Thailand, Sudan, Kenya, and the USA occupies the 20th ranking.[8]

There are seven states from MENA; 11 countries are with Muslim majorities, four have affiliated Muslim groups from the remaining nine states. The main causalities from terrorism are from Muslim world: Afghanistan with 25 % of the total deaths of terror, 23 % of the total is from Iraq, Nigeria 8%, Somalia 8%, Syria is 6 %, Pakistan 5%, Egypt 3%, DRC 3%, CAR 2%, India 2 %, while the rest of the world is just 18%.[9]

These numbers show that terrorism affects Muslims more than any other nation; almost 70 % of deaths are among Muslims.

The deadliest groups in 2017 are ISIS, Shabab, Boko Haram, and Taliban who were responsible of 56.6 % of total deaths of terrorism, in 2012 they were responsible for only 32% of the total deaths, a decade ago they accounted for 6%.[10]
All these numbers indicate the proliferation of terror in the MENA world, particularly in Muslim countries, especially those affected by internal conflicts.

## 1.2. *Categories of Middle Eastern Terrorism*

It is not the right methodology to treat all terrorist groups in the MENA region as one similar group, because they have different motives and objectives. Outside MENA, terrorist groups in wealthy states and developed ones are much more likely to be left-wing or nationalist and less likely to be motivated by religion.[11]

The prevalent main terrorist or violent armed groups in the Middle East can be categorized into the following categories according to their goals: groups that were built for the sake of liberation of Palestine and claim that they only target Zionists inside Israel, they usually categorize themselves as nationalist groups; the second group is ideological, religious groups that persist in building the Islamic empire like ISIS which political goal is uniting Syria and Iraq and forming a caliphate.

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[8]    GTI 2018 op. cit. p. 6.
[9]    Ibid, p. 16.
[10]    Ibid. p. 18.
[11]    Jones, Seth G. – Libicki, Martin C.: How Terrorist Groups End: Lessons for Countering al Qa'ida; Rand Publishing, Santa Monica, 2008.

ISIS distinguished itself by the level of violence indoctrination, which is a method to attract recruits and convince sympathizers of its ability to inflict damage within the 'apostates' and 'infidels.' Abu Musa'ab al-Suri stated that resistance is the whole of Umma's Jihad, not solely that of the elite of the fighting force,[12] al-Suri who is affected by Mao Zedong 'Guerilla Warfare' published in 1932 mainly by the phases of war ( stage of exhaustion of the enemy, stage of balancing, stage of decisiveness and liberation), called for leaderless resistance as called by him 'Individual Jihad,' Abu Baker Naji in the 'management of savagery' was more complicated when he focused on the role of violence against apostates and US targets, one of his favorite targets were the 'apostates touristic sites 'to impact the economy of the Muslim country.[13]

The third type is closer to insurgencies; their goals are to change political regimes within their territories, some of them use sectarian violence as a result of political disenfranchisement; some other groups adopt left-wing and secular anti-religious ideologies in their fight, though their number is in decline. Several surveys conducted public opinion surveys about the public support of these groups; one is the followings:
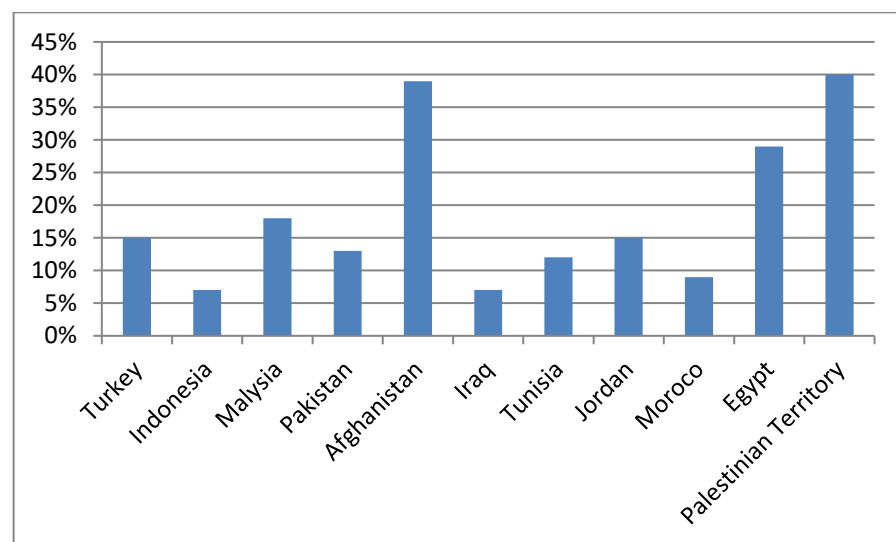


*Figure 1: Support for a suicide bombing in the Islamic States[14]*

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[12]  Abu Mus'ab AL-SURI: Call to Global Islamic Resistance;
       https://archive.org/details/TheGlobalIslamicResistanceCall (downloaded 10 March 2020)
[13]  NAJI, Abu Bakr: Management of Savagery: The Most Critical Stage Through which the
       Umma Will Pass; Institute for Strategic Studies, Harvard University, 2006.
[14]  Source: Based on data from Pew Research Center: Muslim Publics Share Concerns about
       Extremist Groups; 2013. https://www.pewresearch.org/global/2013/09/10/muslim-
       publics-share-concerns-about-extremist-groups/ (downloaded 10 March 2020)
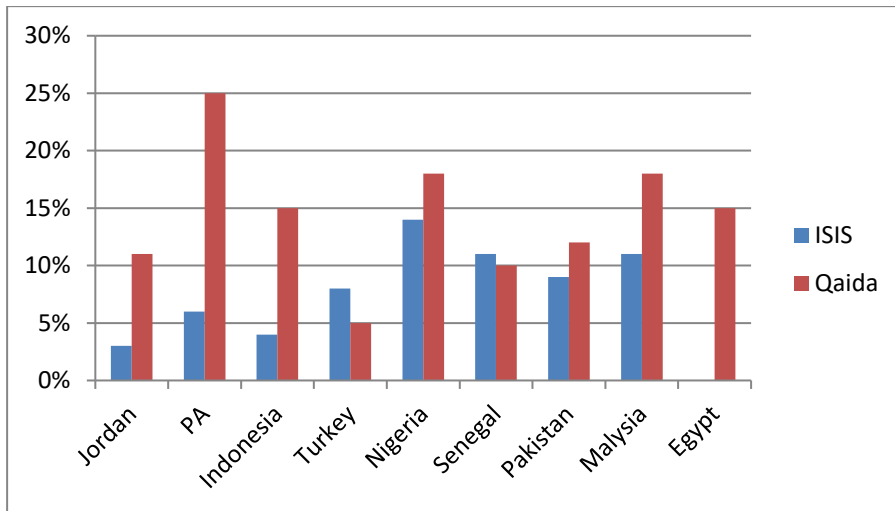
*Figure 2: Support for Qaida and ISIS[15]*

These charts show contradicting representation in the case of Iraq and Afghanistan, who were mostly affected by the phenomenon of suicide attacks. There is a support to operations against the occupation, especially in Palestinian territories. The support to ISIS and Qaida varies in accordance to brutality and media campaigns. In general, Qaida enjoys more support than ISIS. Support to suicide attacks is maintained toward presumed foreign occupation, it is in its climax in Palestinian territories that are affected by deprivations and strict economic measures accompanied by a high rate of unemployment and corruption.

## 2. Root Causes of terrorism

Multiple hypotheses tend to explain terrorism, and the first one suggests that terrorism is the weapon of the weak, in this hypothesis terrorist groups, have no equal power to duel with superpowers or even conventional armies, so they are obliged to use terrorism as a tool for their goals, this does not give good explanations especially to the state-terrorism, or even religious terrorism whenever violence is justified for apocalyptic ideologies.

The second hypothesis is that terrorism is a retaliatory response to violence, these two hypotheses focused on the macro level to explain terror; the new one

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[15]  Source: Based on POUSHITER Jacob: Support for al Qaeda was low before (and after) Osama bin Laden's death; Pew Research Center 2014. https://www.pewresearch.org/fact-tank/2014/05/02/support-for-al-qaeda-was-low-before-and-after-osama-bin-ladens-death/ (downloaded 10 March 2020) and
POUSHITER Jacob: In nations with significant Muslim populations, much disdain for ISIS; Pew Research Center, 2015. https://www.pewresearch.org/fact-tank/2015/11/17/in-nations-with-significant-muslim-populations-much-disdain-for-isis/ (downloaded 10 March 2020)

focused on the individual level, and holds that terrorism is a result of radicalization of particular groups and individuals.

The core of the radicalization approach is based on the thesis that: not all radicals are terrorists, but all terrorists are radicals. The meaning of 'radical,' according to the Oxford English Dictionary, is: 'Advocating thorough or far-reaching political or social reform'; a radical desires fundamental change as opposed to reformists.

Scholars emptied radical from its real meaning into the revolutionary fundamentalist approach.[16] It is common practice to blame religion about terrorism, though pieces of evidence suggest that there is no linkage between terrorism and Islam, first that there is a difference between Islam and Muslims,[17] Islam is not only a religion; its requirement of frequent daily prayers made faith a way of life.[18]

Terrorist leaders use different interpretations to justify their cause and for mobilization efforts. The role of hermeneutics is crucial in this aspect of the interpretation of the holy scripts, in the case of Holy Quran and Sunna, it is explicitly declared that suicide represents a gross crime that entitles the perpetrator to remain in the Hell, but contemporary religious leaders made another interpretation to the already visible verse of Holy Quran and went to the level of endowment the title of martyr 'Shaheed' to the suicider.

The second hermeneutics lies with the interpretation of Jihad as a tool, while the religious scripts declare that the bigger Jihad is to strive against one's desires while minor Jihad is the fight in the name of Allah.

Armed Jihad in Islam has different purposes but emanates from belief in God; the first one is defensive against transgressors in the case of any opponent occupies a Muslim land. (Chapter II, Verse 190) from the Holy Quran states as reference for the duty of Jihad *"fight in the cause of God those who fight you and be not aggressors. God love those who are not aggressors."*

The second type is the offensive Jihad which means to attack other states' armed forces in the case if they did not allow their people to hear the message of Islam, Jihad is not to convert people to Islam but to fight obstacles that obstruct humankind from freely choosing its path.[19]

The other important issue is that more aggressive scripts can be found on the Holy Bible, especially the old testimony, than in the holy Quran.

Robert Pape studied the suicide terrorism, which scholars like to link with Islamists, after compilation of a database of suicide operations from 1980 till 2003, which reached 315 incidents, he found out that suicide attacks are not religiously

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[16]   GOODWIN Jeff: Causes of Terrorism; The Oxford Handbook of Terrorism, p. 259

[17]   HUGHS, William John: The longevity of religious Terrorist Organizations. Senior Projects, Spring 2017. 229. http://digitalcommons.bard.edu/senproj_s2017/229 (downloaded 10 March 2020)

[18]   KISSINGER, Henry: World order; Allen Lane, London, 2014. p. 60.

[19]   Brig. S. K. MALIK: Quranic concept of war; Adam Publishers and Distributors, Delhi, 1992.

motivated, the main perpetrators were secular. Tamil Tigers instigated these attacks and committed 76 out of the 315, which is more than any Islamic group did, PKK conducted other attacks in Turkey, Popular movement of the liberation of Palestine, even Lebanese Christians took part in some operations against Israeli forces. Secondly, these attacks were made mainly as a result of foreign occupation.[20]

### 3. Terrorism is a cause of international conspiracy against the Muslim world

While it is unexpected in academic research to believe in conspiracy theory, nevertheless, this hypothesis has its foundations based on multiple elements, more importantly, it is widely believed in by many Muslims, which make it worth to be mentioned.

The main thrust of al-Qaida came because of the US support along with Pakistani Inter Security (ISI) and Saudi intelligence during the 1980s, and the victory upon Soviet forces provided them with the confidence that they can do the same to the US.

ISIS itself was used effectively by the Assad regime to justify his brutality and that the other option for his replacement is ISIS. The surge of ISIS' brutality in Syria played the role of a game-changer. Syria used ISIS and ensured that the opposition is filled with extremists, for example, in June 2011, Bashar al Assad issued an amnesty decree, freeing several militant Islamists and al Qaeda-linked prisoners, knowing that they would find their way into the opposition and help discredit it.[21]

Zaki Chehab claims that Israeli intelligence exerted efforts to create bogus organizations affiliated with Qaida in Gaza to stigmatize Palestinians with terrorism and use the September 11 attack to its advantage.[22]

Israel has a sordid history of conducting false-flag operations; in 1954, Israeli MOSAD planted bombs in several Western embassies and implicated Muslim Brotherhood in that infamous case of 'Lavon Affair.' In 1967 it destroyed USS intelligence vessel 'Liberty 'in which 37 servicemen were killed and 170 injured.[23]

Many suspect the authenticity of September 11 attacks based on different views; one is that CIA was in knowledge about some perpetrators but did not circulate that information to the FBI.[24]

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[20] PAPE, Robert: Dying to win: The Strategic Logic of Suicide Terrorism; Penguin Random House LLC, New York, 2005. p. 7.
[21] FLIHAN, Rima: To combat ISIS refocus International attention on Assad; The Interpreter, 2015. https://www.lowyinstitute.org/the-interpreter/combat-isis-refocus-international-attention-assad-and-revive-geneva-process (downloaded 10 March 2020)
[22] CHEHAB, Zaki: Inside Hamas; Nation Books, 2007. pp. 183-200.
[23] Ibid.
[24] US Department of Justice Office of the Inspector General: A review of the FBI's handling of information related to the September 11 attacks, (November 2004); 2006. https://oig.justice.gov/special/0506/final.pdf (downloaded 10 March 2020)

US Navy commander Kirk Lippold who had been commanding the USS Cole when Qaida attacked it in Yemen said after the destruction of Cole that he was distressed that the Americans do not recognize the threat and that they need a seminal event to awaken the US public, that seminal event had finally arrived in 2001.[25]

Another essential factor of the conspiracy theory is the motive and consequences; terrorism contradicts with the missionary facet of Islam; terrorism pushes people back rather than to attract them to Islam.

Another issue, is that Abu Mas'ab al-Suri role is ambiguous, he is one of the leading theoreticians and practitioners of terrorism, he had western links in Spain, UK, arranged interviews through his center of studies to Bin Laden with BBC and CNN, the US captured him in Pakistan in 2005 after an offer of five million, and released him later to Syria, some believe that Bashar al-Assad released him in 2012. However, he is suspected to have a role in 2004 bombings in London and 2005 terrorist attack in Madrid. (I) doubt that he even one of the main planners of the September 11 attacks.

The following chart depicts the number of deaths from terrorism in the world for the time interval from 2002 until 2017. It clearly shows that Muslims are the main affected people in the globe of terrorism.
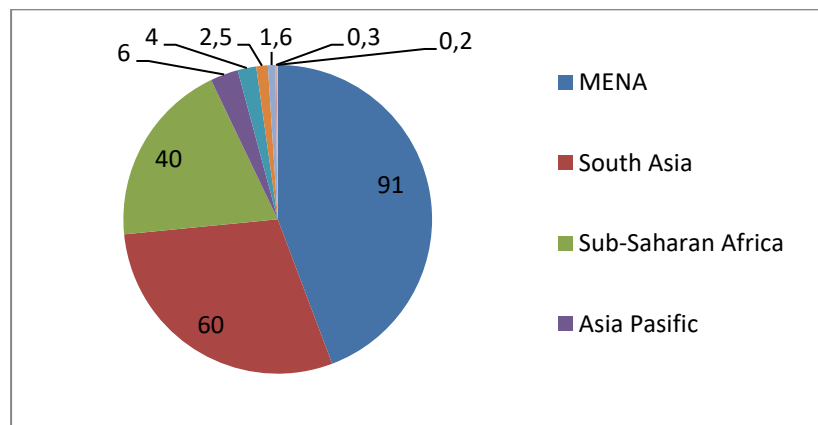


*Figure 3: Deaths from terrorism*[26]

## 4. The Underlying Conditions

### 4.1 Terrorism is a consequence of the Socio-economic political situations inside the Muslim world

The Muslim world is plagued with different diseases that hinder its advance, mainly socio-economic, and political ones. The US counterterrorism strategy after 2003 admitted the existence of underlying conditions; nevertheless, it did not give it the needed care it deserves, instead the only solutions to diminish the underlying

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[25]  TENET, George: At the Center of the Storm; Harper Collins, 2007. p. 163.
[26]  Source: The data is from GTI 2018. op. cit.

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conditions were to partner with international community to strengthen weak states and prevent (re)emergence of terrorism, and to win the war of ideas.[27] These measures are not enough, and the US has many different means to leverage its power in this aspect.

### 4.2 The socio-economic factors

The first factor among the direct reasons for instigating terrorism is the existence of grievances among identifiable subgroups,[28] this reason has motivated terrorism in Basques, Britons, and many other parts to ask for secession from their original states; this applies to movements in Iraq, Bahrain, Yemen. However, many studies suggest that the existence of grievances is not necessarily enough factor for the outbreak of terrorism.

The other factor is the lack of opportunities for political participation; in this aspect, educated people with no opportunities for employment are candidates for terrorist recruitment; many revolutions came out of students' unrests. The direct, immediate factors for terrorism 'precipitants' are the most difficult to guess and know, because the preconditions are suitable and just need for a catalyst to occur, one of the main precipitants are the excessive use of force.[29] Outside MENA, states with upper income are more likely to nationalist groups, left-wing groups while developing countries more likely to have religiously motivated groups,[30] let alone environmentalist ones, the issue with religious ones that they last longer than left-wing groups because of their better capabilities of recruitment and mobilization.[31]

### 4.3 Youth Explosion

The high rate of birth in Arab and Islamic states enlarged the youth percentage at the age span between 15-35, accompanied by failed economic regimes that have low economic growth. It seems unreasonable that poor people, e.g., in Nigeria, Pakistan, Egypt, Afghanistan, and others to have large families that they cannot afford to sustain with education and better health conditions. In contrast, productive individuals in wealthy states have fewer members if none in their families, the explanation for this phenomenon is that families are part of social security and that play a role in states like Afghanistan when sons have to work to provide their families with needed income, or even to offset any expected loss because of endured conflicts in these states.

Generally, when institutions such as social security are malfunctioning or missing, parents have an expected return from their children in the form of child labor, and the provision of financial support for parents in older age to such an extent that having an additional child can be seen as a secure minimum level of income.[32] In

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[27]  National Strategy for Counterterrorism of the United States of America; October 2018. p. 23, https://www.whitehouse.gov/wp-content/uploads/2018/10/NSCT.pdf (downloaded 10 March 2020)
[28]  CRENSHAW, Martha: The Causes of Terrorism; Comparative Politics, 1981/4. p. 383.
[29]  Ibid.
[30]  JONES – LIBICKI op. cit.
[31]  Ibid.
[32]  AGADIANIAN, Victor – PRATA, Ndola: War, peace, and fertility in Angola; Demography, Vol. 39, No. 2, May 2002. pp. 215-231.

developing countries, children are often seen more as an investment which indirectly increases parents' utility by increasing their lifetime income or lifetime consumption – as in, among others.[33] More than a consumption good, as it is usually the case in developed countries.[34]

According to a study by Population Action International (PAI), there is a correlation between terrorism and states with high youth bulge; youth bulge exists mainly in MENA, Sub-Saharan Africa, Pacific Islands, Southern Asia, there are currently sixty-two states with two-thirds of their population is under thirty 'very young,' most of the states that are impacted by terrorism are among those states. 'Young States' have more predilection into social unrest. However, this rule cannot be confirmed solely; the state should be prone to Terrorism and have ills like corruption, high rate of unemployment, low level of democracy, low Humanitarian Development Index (HDI) that yield frustration among young inhabitants who are more energetic than men in their 50s.

The thesis is that societies with a young and rapidly growing population, with high birth rate, high population growth rate, often end up with unemployment; those disaffected youth are prone to be recruited by a terrorist organization or criminal gangs.

Nigeria is the largest in population in Africa, according to the UN World Population Prospects 2017 (United Nations, 2017), the population of Nigeria, currently, the world's 7th most significant, is projected to become – by 2050 – the third-largest in the world. This projected population growth is, however, unlikely to be economically sustainable.

Egypt population increases of more than one million per year, is the largest Arab state with a limited economy, high rate of unemployment, with millions of Egyptians leave abroad for better chances.

In Afghanistan, nearly 43% of the population is under 14; demographically its population skewed toward less than 14, less than 2.5% of its population is more than 65 years old. In the Pakistani case, almost 53 percent, falls in the 15–35 years age bracket. While less than 5 percent of the population is over the age of 65.[35] For more representation, nine states from the top ten states of terrorism score were compared with three EU states with a lower terror index; the comparison is about the median age, GDP per capita.

[33] NEHR, Philip A.: Peasants, Procreation, and Pensions; American Economic Review, 1971/3. pp. 380-389; and ALESSANDRO, Cigno: Intergenerational transfers without altruism: Family, market, and state, European Journal of Political Economy, 1993/4. pp. 505-518.
[34] ROTONDI, Valentina – ROCCA Michele: Bombs and babies: Terrorism Increases Fertility in Nigeria; 2019. pp. 7-8. http://paa2019.populationassociation.org/uploads/192867 (downloaded 10 March 2020)
[35] CIA World Factbook, 2019. https://www.cia.gov/library/publications/the-world-factbook/geos/pk.html (downloaded 10 March 2020)
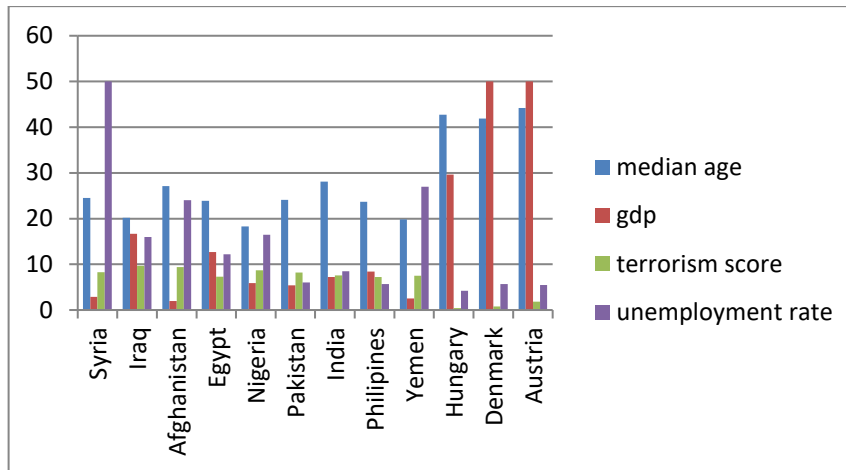
***Figure 4. The relationship between terrorism and Median age, GDP, and unemployment***[36]

From the chart, it can be noticed that terrorism correlates with the median age of the states' population, states with more young people between (15-35) years old are more affected by terrorism, secondly, if the GDP per capita is low, unemployment rate is high, these are enough symptoms to cause frustration among the youth especially well educated portion.

### 4.4 Conflicts

Conflicts and political terror are the main drivers for terrorism in 2017,[37] the highest ten countries in numbers of terrorism engaged in at least one conflict, if we track states like Iraq, Syria, Yemen, Afghanistan, we find that terrorism was at its lowest point before the eruption of conflicts. Ten countries accounted for 84% of the total deaths due to terrorism in 2017; every one of these states has at least one conflict. On the other hand, one of the main reasons for the decrease of terrorism is the end of violent conflicts.

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[36]   Source: CIA Factbook 2019. and GTI 2018. op. cit.
[37]   GTI 2018. op. cit. p. 4
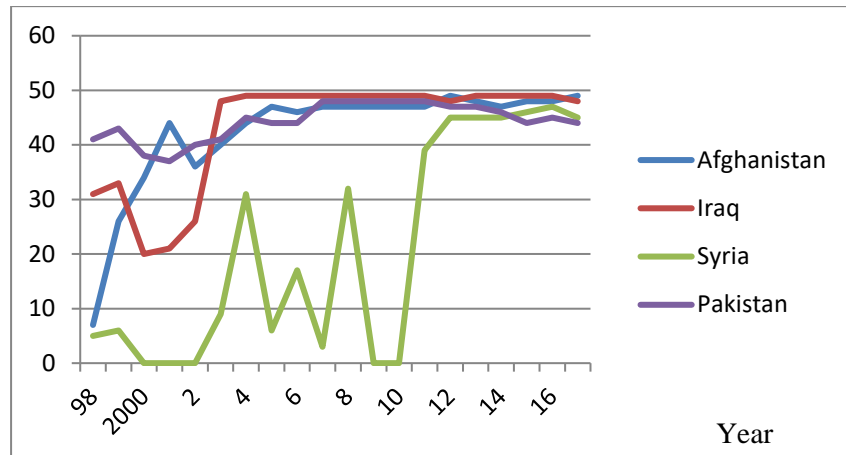
*Figure 5: The Development of Terrorism of the Most Impacted States*[38]

This chart establishes the relation between terrorism and conflict, for example, it shows that Iraq held a low rank of terrorism until 2003 when it jumped from rank 14 to 10, in 2007 peaked to third-ranking and followed the same path of first and second in the rank of terrorism; Afghanistan was in 1998 48th rank, but in 2007 until now holds one of the first three places; Syria in 2010 was in the 50th ranking, but from 2012 is one of the first five countries in the number of terrorist incidents.

The problem with conflicts is that terrorist groups change their character to insurgencies that are intransigent to dissolve and mostly demand a more comprehensive approach to weaken the insurgencies and promote the legitimacy of the suffering state.[39]

From the previous chart, it is evident that terrorism increases by the time of conflicts, and that can be explained by the absence of the rule of law during conflicts periods.

Terrorism may prosper in a nation with an intermediate level of ethnic fractionalization, insofar as a homogeneous society is unlikely to tolerate the threat of terror. Moreover, a very heterogeneous society is better to be able to assimilate groups with different agendas, thereby limiting the appeal for terrorism.[40]

Conflicts cause state failure, which is a state lacking the capability to fulfill its sovereign responsibilities, lacking law-enforcement, intelligence, or military capability to assert their control over their territory.[41] State weakness invites a range

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[38]   Source: GTI 2018., with inversion to the original numbers to indicate that the highest-ranking is ascending rather than descending

[39]   CIA (2012) op. cit.

[40]   BASUCHOURDHARY, Atin – SHUGHART, William: On ethnic conflict and the origins of transnational Terrorism; Defense and Peace Economics, 2010, vol. 21/1. pp. 65-87.

[41]   National Strategy for Combating Terrorism (NSCT); National Security Council (NSC), 2003.

of illicit actors, including international terrorists, globally networked insurgents, and transnational criminal organizations (TCOs).[42]

The gaps in three main areas characterize failed states: failing to control their borders and territories, failing to meet the basic needs of their citizens like education, and failing to provide or maintain democratic legitimacy.[43] Failure occurs due to external and internal factors; internal are the result of weak leadership and governmental decisions; it seems that political leaders are the most culpable factor in the state's failure.

The central conflict in the MENA and Muslim World is the Israeli-Palestinian, which is a definite source of Palestinian groups, and other groups claim that the liberation of Palestine is their primary task. The US counterterrorism strategy (2003) confirms this:

*„Finding a solution to the Israeli-Palestinian conflict is a critical component to winning the war of ideas. No other issue has so colored the perception of the United States in the Muslim world. The Israeli-Palestinian conflict is critical because of the toll of human suffering, because of America's close relationship with the state of Israel and key Arab states, and because of that region's importance to other global priorities of the The United States. There can be no peace for either side without freedom for both sides."*[44]

### 4.5 Political Structure

Max Weber claims that states need legitimacy for their rule and that the primary sources of legitimacy are three: traditional, religious, and legal, which is based on the representation of the people and the rule of law.[45] Legal legitimacy is close to absent in the MENA region, the only Arab state that enjoys a high profile of democracy is Tunisia; others are a type of monarchies with static rulers, authoritarian republics, or sectarian democracies like Iraq and Lebanon.

Some of these states predicate their legitimacy on coercion and brutality, others on a religious basis, which is not enough for modern states. The first point in the political factor is the political disenfranchisement, which is yielded because of uneven representation of ethnicities, religious sects, or branches in the state.

Quantum communications conducted a study that interviewed 49 ISIS members who were detained or defected from the group in Iraq and Syria, to find out the main reason for their enrollment in ISIS. The following figure depicts the compilation of the obtained data. The main reason was Sunnis' disenfranchisement in Iraq; the group invests in that feeling.

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42  MATFESS, Hilary – MIKLAUCIC, Michael: Beyond Convergence. World Without Order; US National Defence University, Washington D.C. 2016.
43  UNDERHILL op. cit. p. 20.
44  NSCT (2003) op. cit. p. 24.
45  SPENCER, Martin E.: Weber on Legitimate Norms and Authority; The British Journal of Sociology, 1970/2. pp. 123-134. DOI:10.2307/588403
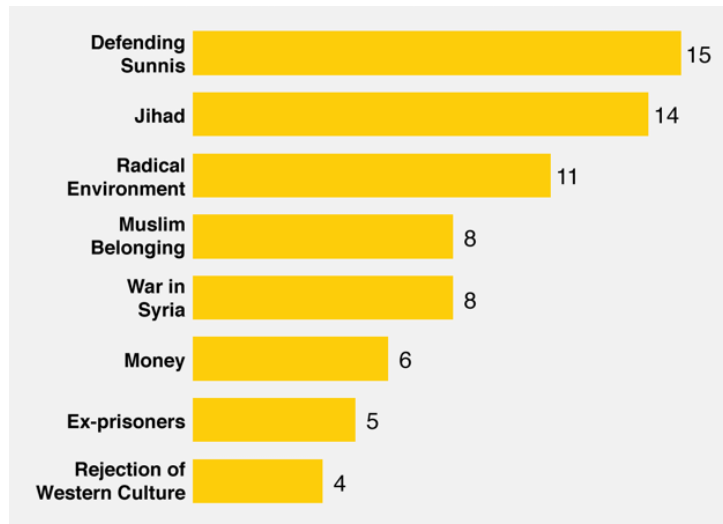
*Figure 6: Reasons for joining ISIS*[46]

The critique for this survey is that the sample number is low; the second issue is that it was held in an inconvenient environment that affect their answers; the other point is that it does not explain the identity of these fighters – locals or foreign fighters.

The new scientific finding by this research is that monarchies and similar systems like the GCC countries in the Arab world are better off against Terrorism than their peers of republican systems in the Middle East.

The following table chart shows the comparison between Arab Monarchies with Arab republics; the index is shown here the average GTI for these states (states like Oman and Mauritania were excluded because of unavailability of data).

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[46]   Patrick TUCKER and defense one: Why Join ISIS? How Fighters Respont When You Ask Them. A study finds that motivations vary widely; The Atlantic, 2015. https://www.theatlantic.com/international/archive/2015/12/why-people-join-isis/419685/ (downloaded 10 March 2020)
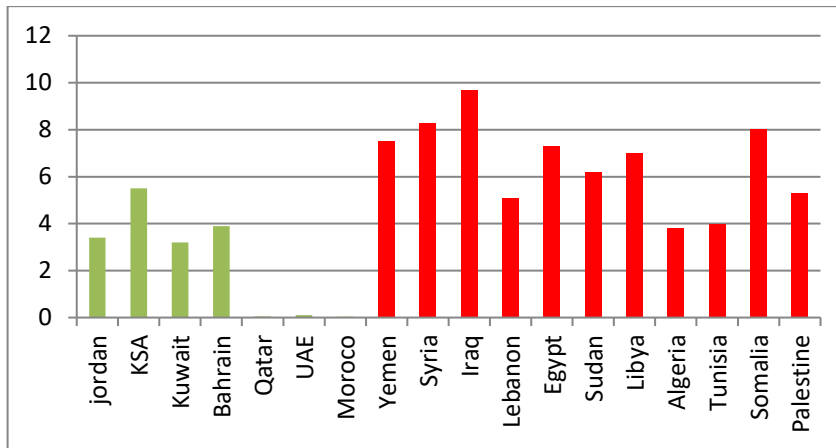
*Figure 7: Republics versus Monarchies (and GCC states) in the Arab World*[47]

From that chart, it can be noted that Monarchies and similar systems like GCC states are better than Arab Republics in the index of Terrorism, and accordingly, their ranks are less than them.

The explanation is that monarchies are more legitimate than republics since they enjoy religious and traditional legitimacies (Tribalism), while republics legitimacy is said to be legal while citizens are sure that it is coercive and partially fake.

The second reason is that monarchies regimes appoint prime ministers who are taken as scapegoats for any executive failures, and they use cabinet reshuffles strategy from time to time, which make a fake democracy perceived by citizens.

The last explanation is that Terrorism is used to bolster the legitimacy of some republics and evade the pressure from western powers to apply political changes in pretexts that the option is Islamic Brotherhood is the one who can take over the system.

## 5. Conclusions

It is apparent from the above discussion that religion provides a mobilization tool for terrorism. Religious teachings are similar between the three monotheistic religions, though religious groups do not achieve their goals because of the breadth of their objectives that make their goals beyond acceptance.

The powerful facet of current terrorism does not conform to genuine Islamic teachings; it is more affected by European anarchic movements and writings of revolutionaries like Marx, Mao Zedong. The primary directive for Islamic wars was issued to warriors by first Caliph Abu-Baker, which reflects the moderation and humanitarian approach *"Remember that you are always under the gaze of God, and*

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[47]  GTI (2018) op. cit.

*on the eve of your death; that you will have to reckon on the last day;.....When you fight for the glory of God behave like men, without turning back, but let not the blood of women or that of children or that of aged tarnish your victory, do not destroy palm trees; do not burn dwellings or wheat fields; never cut down fruit trees; only kill cattle when you need it for food; when you agree upon a treaty take care to respect its clause; as your advance progresses. You will meet religious men who live in monasteries and who serve God in prayer: leave them alone, do not kill them or destroy their monasteries.*"[48] This call for humanization the warfare at the time when barbarian kings call for massacring anything taller than the hilt of their swords.

The fundamental postulates of 'Islamic War' are pertinent and sometimes go beyond the norms decreed by the rules of war of Hague and Geneva conventions. Middle Eastern political and socio-economic environment provides a fertile ground for the growth of terrorism.

The Palestinian cause provides a good reason for the sustainment of the terrorism, as it seems for many that struggle against Israel is legitimate as it still occupies Arab land.

The main findings of this study are that monarchies in the Middle East are more immune to terrorism than republics; the second is that a high percentage of youth between 15-35 is a primary reason for internal turbulences, also that the existence of protracted conflicts provide fertile soil to Terrorism.

MENA is especially conducive to terror groups' success and survival because of indigenous support, weak governments, terrorist infrastructure, and massive recruit pooling.[49]

Another conclusion is that MENA states are going to witness other grassroots movements that emanate to change the governing regimes that are not qualified to provide jobs and security, the main reason that accelerates this revolutionary factor is the youth explosions without democratic rights, and with low economic growth.

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[48] MALIK op. cit.
[49] BLOMBERG, S Brock – GAIBULLOEV, Khusrav – SANDLER, Todd: Terrorist group survival: Ideology, tactics, and base of operations; 2011/3. p. 450.

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ABDOUSS MOHAMED

## THE GEOPOLITICAL AMALGAMATION OF MIXED-MIGRATION THROUGH SPANISH ENCLAVES OF 'CEUTA AND MELILLA'

*Abstract*

The revenge of geography in Africa has given birth to two cities situated between the North and the South which do belong to another civilization. So far, the World consists of 196 countries in total, but only 25 nations qualify as very rich, 16 of those richest countries are located in Europe. The so-called equator borders between the richest countries of western European that define and symbolize the biggest bloc of the first World versus the poverty, weakness and extreme-corruption which politically and culturally marginalized and impoverished the third country nationals of Africa or 'countries on the UN's list of least developed nations.' The Spanish - European enclaves, Ceuta and Melilla, situated on the tip-top of North Africa have always been the hotspot by internationally attracting diplomatic intentions. Nevertheless, the two European twin-sisters have benefited much autonomous status since 15th century. Besides, a couple of other Spanish islands neighboring the Mediterranean and the Atlantic Ocean, 'Melilla and Ceuta' like any other Spanish territories have gained European diplomatic recognition in addition to their state citizenship since Spain joined the European Union on 1 January 1986. 'Ceuta and Melilla' are borderlands between two diverse civilizations where legal and illegal factors collide. Factors such as economic agreements, trade, legal and illegal migration, drug smuggling and human trafficking have evolved in such culturally diverse populations. Historically speaking, facts and authentic experience will be our witness throughout this paper to better understand and analyze the geopolitical dimensions of the Spanish-European territories primarily 'Ceuta and Melilla' lying on the tip-top of the African continent but belonging to Europe.

*Keywords*: 'Ceuta & Melilla', Enclaves, Geopolitics, Media, Multiculturalism, Maghreb, National Identity, Irregular Migration, Insecurity.

### INTRODUCTION

"Europe or Die" is the European Elysium dream for mostly desperate Africans who deliberately believe in El Dorado as an earthly Elysium where people live trouble-free lives. The notion of "Europe or Die" has challenged the United Nations immigration plans in particular the recent Global Compact for Migration[1] and yet has changed the whole concept of 'International Immigration' policies, as well as threatening the geopolitical stability of individuals and globally the insecurity and sovereignty of EU nations. Migrants from Sub-Saharan and North Africa 'Ceuta and

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[1] Global Compact for Migration is the first-ever UN global agreement on a common approach to international migration in all its dimensions; https://en.euractiv.eu/wpcontent/uploads/sites/2/special-report/EURACTIV-Special-Report-Migration-and-security-inEurope.pdf (downloaded 10 March 2020)

Melilla' are a direct source of the influx of 'Irregular Migration' which is claimed to be the most challenging doctrine threatening the very existence of the European civilization, its democracy, economy and cultural values.

The perplexity that challenges most of the people, including academics, is how and why "Irregular Immigration or Illegal Migration" is directly related to insecurity?[2] In fact, the challenge is neither the sole concern of a single department of immigration nor the concern of a single EU member state. It is the biggest challenge of our time that puts on the payroll the maximum attention of international heads of states as the most disputed phenomenon of the 21st century. Immigration is not a new occurrence especially for the EU member states, it is always at the heart of all political debates, and yet has been strongly a subject of dispute among politicians and decision-makers during every single meeting of the European parliament in Brussels. Thus, European leaders are facing a huge catastrophic smuggling enterprise emerging in territories where states have broken. Every day, thousands of hopeless individuals from third country nationals try to enter Europe by forcefully storming the border fence that separates Spain's Ceuta and Melilla cities from Morocco.

For a very long time Morocco has been a transit route for seasonal migrants dreaming of reaching Europe through the Maghreb.[3] However, as the two flash points, Melilla and Ceuta, the Spanish enclaves at the very northern tip of Africa tighten the borders security between Europe and Africa, thousands of young sub-Saharan migrants are vandalized in Morocco.[4]

Morocco is the first country in the Maghreb and in the Arab nations to develop a legal migration policy (Delphine Perrin, 2016),[5] however, thousands of migrants from numerous African countries remain stranded and undocumented, even though the government has begun granting legal residence permits to migrants and refugees.[6] Paradoxically, these people who believe they want to experience the joy of "Elysium-Europe" are immediately ready to leave not only Morocco after their arrival by risking their life, leaving everything behind in their land of origin with no savings, no control, no medical check or blood tests and in most cases with no official identification or official documents. Practically, there is neither a possible capacity to host such a massive flow of irregular migrants nor a willing of any stable nation to accept thousands if not millions of unskilled and undocumented migrants.

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[2] KOSTAS, Stylianos: Irregular vs. Illegal Immigration: Setting the Definitions. An Overview of European Practice; Slovenský Národopis, 2017/4. pp. 420-426. https://www.sav.sk/journals/uploads/01161014sn.2017.4.04.pdf (downloaded 10 March 2020)

[3] The Members of the Arab Maghreb Union (AMU): Mauritania, Morocco, Algeria, Tunisia, Libya.

[4] DE HAAS, Hein: The Myth of Invasion: Irregular Migration from West Africa to the Maghreb and the European Union; International Migration Institute, University of Oxford, 2017. pp. 11-12.

[5] PERRIN, Delphine: Regulating migration and asylum in the Maghreb: what inspirations for an accelerated legal development? In: F. IPPOLITO and S. TREVISANUT (eds.): Migration in the Mediterranean – Mechanisms of International Cooperation; Cambridge University Press, 2016. pp.192-214.

[6] Migration Policy Institute (MPI) Brussels, 2018. https://www.migrationpolicy.org/article/morocco-setting-stage-becoming-migration-transition-country (downloaded 1 Jun 2018)

"Europe or Die" is the only belief desperate young Africans have in their minds, which makes it the most fanatic and radical way of thinking. They dramatically believe it is a given right to break into one of the European member states; hence, this makes it a dangerous source of organ trafficking and human trading networks (Luis R. Miranda, 2017), slavery, mafia of drugs and a lot much more.[7] In a desperate journey, these immigrants escape mostly poverty, persecution, corruption, lack of freedom and security in pursuit of a happy fake El Dorado.

## 1.    Geopolitical and Historical Background of Ceuta and Melilla

The Schengen Area is the world's largest visa free zone (18 January 2019),[8] this means Europe's external and internal borders are facing hybrid challenges that directly threaten its very existence. Hence, the first direct danger is "Mass Irregular Migration" from Morocco through Melilla and Ceuta to different EU member states, which is causing numerous hybrid threats to the internal and external borders of the European member states and to the Schengen territory. The European-African geopolitical plan has been the subject of contentious debate for ages. The historical background of Ceuta and Melilla[9] is very confusing for most of the European citizens. Historically, the fact that Ceuta and Melilla are still Spanish and not Moroccan is because these two enclaves have never belonged to Morocco.[10] "Ceuta and Melilla are built upon a complicated synthesis of clashes and alliances between the Amazigh,[11] Portuguese, Arabs, Spanish and later French by representing a multi-faceted-line notably Spain and Morocco.[12] The two countries represent an ex-colonizer as opposed to an ex-colonized. Melilla and Ceuta are concidered the most important Spanish ruled territories on the tip-top of Northern Africa by succeeding

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[7]    MIRANDA, Luis R.: Organ Trafficking: The other Business behind the European Migrant Crisis; February 22 2017. https://real-agenda.com/organ-trafficking-business-european/ (downloaded 1 January 2018)

[8]    Schengen    idea.    Last    Updated    on    May    9th,    2019. https://www.schengenvisainfo.com/schengen-visa-countries-list/ (downloaded 3 January 2019)

[9]    Melilla & Ceuta: Islands belonging to Spain: the Chafarine Islands (las Islas Chafarinas), Badis Peninsula (Peñón de Vélez de la Gomera), Nekor Island (Peñón de Alhucemas), and the Parsley Island (la Isla Perejil or Laela)
Morocco's rocky islands still under Spain's control, or in a status quo, are: the Chafarine Islands (las Islas Chafarinas), Badis Peninsula (Peñón de Vélez de la Gomera), Nekor Island (Peñón de Alhucemas), and the Parsley Island (known also as la Isla Perejil, Tura or Laela)

[10]    FERRER-GALLARDO, Xavier: The Spanish-Moroccan Border Complex: Processes of Geopolitical, Functional and Symbolic Rebordering; Political Geography, 2008/3. p. 303. GOLD, Peter: Europe or Africa?: A Contemporary Study of the Spanish North African Enclaves of Ceuta and Melilla. Liverpool University Press, Liverpool, 2000, p. 144.

[11]    *Amazigh*, plural Imazighen: stands for the true Indigenous people of North Africa. The biggest population of Imazighen dwells in Morocco. Amazigh or Imazighen means "Free Men" in the Indigenous Tamazigh language. However, the more common - though incorrect – term among outsiders for Imazighen is Berbers, a term that is largely rejected by Imazighen for its negative connotations. It's thought to be related to the word 'barbarian', which is not true.

[12]    Stefan ALSCHER: Knocking at the Doors of „Fortress Europe": Immigration and Border Control in Southern Spain and Eastern Poland; Humboldt University, Berlin, Working Paper 126, 2005. p. 10.

the epoch of Reconquista. Spain took control of Melilla in 1497, while Ceuta had been seized by Portugal in 1415, which was transferred to Spain under the Treaty of Lisbon in 1668.[13] So far, Ceuta was officially Portuguese and then became Spanish and remains so, but never been Moroccan. Practically, Spanish presence in Ceuta and Melilla goes back to more than 370 years, and yet Morocco was not even close to exist 370 years ago. If we want to go back in time, before the existence of modern-day states and countries, Ceuta first was part of the Caliphate of Cordoba, which is now known as Spain, it was part of the Hispania-Transfretana that most of what is now know (Morocco) if not all of it has belonged to this region that was dependent very much of the province of Baetica, hence what nowadays is Spain.

Way back when in history the Arabs colonial conquest of the Maghreb and the rise of Islamic ideology, in North Africa[14] began in the seventh century brought mostly Arabic-speaking populations to present-day Morocco, Algeria, Tunisia and Libya. Thus the Maghreb region has later attracted the attention of large numbers of Jews and Christians from Spain after the centuries-long Reconquistan of the Iberian Peninsula ended in 1492. The Franco-Spanish "protectorate"[15] over Morocco was formally established in 1912. Meanwhile, France gained control over the heartland of Morocco, the Spanish protectorate was limited to the southwestern Sahara and the northern Rif mountain territories. In the course of the protectorate era tremendous infrastructure projects were launched besides roads construction and a rapid growth of cities along the Atlantic coast region boosted rural as well as urban seasonal migration within Morocco.

So far, 'Ceuta and Melilla' have been built upon quite a complex synthesis of clashes and alliances between first the Amazigh dynasty[16] then the Portuguese, Arabs, Spanish and later the French by representing a multifaceted borderline between Spain and Morocco.[17]

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[13]  DEL PINO, D.: Ceuta y Melilla: Un Contencioso Pendiente con Marruecos: Por una actitud Espanola y Marroqui realista, Madrid: Instituto de Cuestiones Internacionales, INCI Publication, 1983. No. 20.

[14]  BRETT, M.: The Arab conquest and the rise of Islam in North Africa; In: J. FAGE (eds.): The Cambridge History of Africa; Cambridge University Press, 1979. pp. 490-555.

[15]  Protectorate: The Treaty of Fez of 20th May 1912 converted Morocco into an area under the protection of Europe. Morocco was divided into three influence zones: the international zone of Tangier, the French Protectorate in the south, and the Spanish Protectorate of North Morocco, a narrow strip that served to guarantee sovereignty over the Spanish North African cities of Ceuta and Melilla and to prevent France from strangling Spain geographically. MORALES Lezcano, V.: Espan˜a y el Norte de A´frica: El Protectorado en Marruecos (1912e1956). Universidad Nacional de Educacio´n a Distancia; Madrid, 1986. p. 43.

[16]  Amazigh (plural Imazighen): stands for the true Indigenous people of North Africa. The biggest population of Imazighen dwells in Morocco. Amazigh or Imazighen means "Free Men" in the Indigenous Tamazight language. However, the more common – though incorrect – term among outsiders for Imazighen is *Berbers*, a term that is largely rejected by Imazighen for its negative connotations. It's thought to be related to the word 'barbarian', which is not true.

[17]  ALSCHER op. cit. p. 10.

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Based on Samuel P. Huntington's hypothesis (S. P. Huntington, 1996)[18] of clashes and conflicts between nations originating on the Arabian Peninsula, spreading across North Africa and Iberian Peninsula was and still is about a geopolitical liaison connecting the ex-colonizers versus the former – present – colonized case, which is still going on. The boundaries of North African continent lacks a sense of African identity, contrary to Huntington claims that some Africans are increasingly developing a sense of African integration; however, it's been far from the sphere of coexistence.[19]

The influx of migration form Africa towards Europe can be considered as one of the major by-products of the clash of civilizations in modern times. Meaning, a conflict of different cultures, religions and ideologies that occur on a smaller scale even in one single state or territory. This phenomenon stems from interest conflicts in many cases in which belligerents deny each other's the right to express freely their opinions and reach potential agreement based on mutual recognition and respect. In the meantime, innocent people who refuse to take sides, mainly the vulnerable young men and women, find themselves forced to flee the hot spots clinging fervently to hope for a better and prosperous future. Thus, these are certain assumptions one should bear in mind when called upon to tackle the issues of mixed migration. These innocent people running for their lives and chasing their desperate dreams like any individual in the world.

Due to a massive demand for labour, migration stared in the course of World Wars I and II (1914 -1945). During which an urgent deficiency of manpower not only in Spain but mostly in France has led to an active recruitment of thousands of Moroccan active youngsters for farming, factories, mining, and yet tens of thousands of Moroccan young men have fought in all major battles of WWI.[20] The colonial era, from 1912 until 1956, marked the beginning of migration to France. Most of those migrants have returned to Morocco after both wars ended. For more than six centuries, Portuguese Colonial Empire has first started by the capture of Ceuta in 1415 to the handover of the Portuguese Macau to China in 1999.[21] Way back then, the Portuguese Overseas was the strong realm that took over the northwest of Africa, part of the

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[18]   HUNTINGTON, Samuel P.: The Clash of Civilizations and the Remaking of World Order; Simon and Schuster, New York,1996.

[19]   Samuel P. Huntington claimed in thesis, „*The Clash of Civilizations and the Remaking of World Order*" New York, 1996, the modern dispute take place between various cultures, ethnic groups, basically religious ideologies from different backgrounds. He discribed that as civilizational fault-lines replaced the political and ideological boundaries between nations.

[20]   Safaa Kasraoui, approximately 40,000 Moroccan soldiers fought for freedom and peace on the Allied side during World War I. Morocco World News. Nov 12, 2018, source in: https://www.moroccoworldnews.com/2018/11/257552/history-moroccan-soldiers-fought-major-battles-wwi/ (downloaded 28 October 2018) An interview in Rabat, with Jean-Pierre Riera, a Lyautey high school history teacher, who spoke about the bravery of Moroccan soldiers during the first world war.

[21]   Kris CHENG: Declassified: Portugal may have hoped for a 2004 Handover of Macau to China, instead of 1999. Hong Kong Free Press. 27th Nov 2017 https://www.hongkongfp.com/2017/11/27/declassified-portugal-may-hoped-2004-handover-macau-china-instead-1999/ (downloaded 1 January 2018)

Amazigh (Berber) dynasty, and ruled over most territories of what is now known as Northern Morocco.[22]
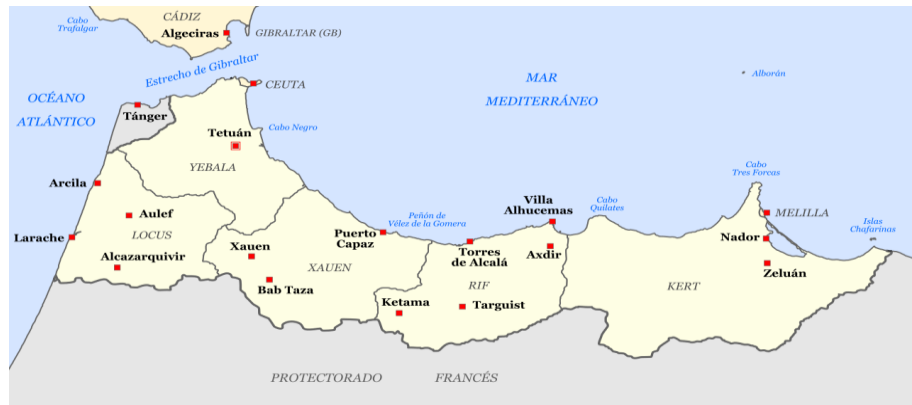


*Figure 1: Map of the Spanish "Protectorate" indicates Ceuta and Melilla besides the archaeological sites of all other regions and towns.*[23]

Likewise, the Carthaginian, Greeks and the Romans have sequentially occupied Ceuta and Melilla for a short period of time during the 5th century.[24] Ceuta; however, has dramatically gone through historical events unlike Melilla's due to its geopolitical situation. After being exposed to the Portuguese empire, both Melilla and Ceuta were ruled by the Amazigh dynasties,[25] after that Arabs overcame during the 8th century. Hence, when Portugal seized control of Ceuta to hand it over to Spain, the latter decided to conquer Melilla in 1497, after a long opposition of attacks and sieges by Arab forces trying to conquer and defeat Spain, which doomed to failure. After almost 60 years later, Melilla comes totally under the Spanish crown precisely in 1556. Consequently, Spain reigns over Ceuta and comes under the Spanish jurisdiction by default, straight after Portugal and Spain united under one crown, as the Iberian Union

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[22] Historical and Recent Trends in Immigration and Emigration, www.bpb.de/gesellschaft/migration/laenderprofile/58463/historical-trends?p=all#footnode1-1 (downloaded 10 November 2018)

[23] DÍAZ-ANDREU, Margarita: The Archaeology of the Spanish Protectorate of Morocco: A Short History; 2015. https://www.researchgate.net/profile/Margarita_Diaz.Andreu/publication/27376471_Te_Archaeology_of_the_Spanish_Protectorate_of_Morocco_A_Short_History/links 559cf1c008e4e46-206e83/The-Archaeology-of-the-Spanish-Protectorate-of-Morocco-A-Short-History.pdf (downloaded 10 March 2020)

[24] Joshua J. MARK: Carthage; 2018, https://www.ancient.eu/carthage/ (downloaded 1 July 2018)

[25] "Melilla" is purely an Amazigh-Berber name, which stands for the „ White one". In 1497, Melilla was conquered by the order of the Duke of Medina Sidonia. The town was overtaken from 1694–1696 and again in 1774-1775. While "Ceuta" Referred to as 'Sebta' in Berber, Ceuta is another Spanish territory in North Africa. It is separated by 8.7 miles from the Cadiz province and also shares a border with M'diq-Fnideq, source in: https://face2faceafrica.com/article/tthese-two-towns-in-africa-are-still-under-spanish-rule-after-series-of-battles (downloaded 1 January 2018) https://www.bbc.com/news/world-africa-14114627 (downloaded 1 January 2018)

Empire in 1580 to 1640. Later after the Iberian Union came to its end in 1640, Melilla and Ceuta continue to exist as officially the very only autonomous Spanish – European states in all of Africa.[26]

### 2. Why does Morocco have the highest rate of 'Brain Drain' in the MENA[27] region, and why do its Millennials abandon their homeland?

After World War II, migration was the most prominent social manifestation in the history of the human race. Thus, migration is a direct consequence of colonialism, so far citizens of North African colonies would like to migrate to the previous colonial powers such as Spain and France, the highly most wanted destinations for Moroccans, Algerians and Tunisians alike,[28] throughout history, North African countries have experienced various forms of migration; internal and external, voluntary and forced, individual and collective, legal and illegal. Moroccans' migration motifs to Europe are various though impacted by two dynamic variables: the first is colonialism and the second is the demand for low-skilled labor. *„The Moroccan migration already started more than a century ago, from the World War I, when more than 100,000 Moroccans migrated to France to serve in the army or mainly by taking part in jobs, disliked by French citizens, as unskilled and low-skilled workers.''*[29].

The 21st-century millennials who are descending from the Maghreb region have inherited such incentives for migrating into mainly western countries, which have to do, first and foremost, with the welfare system and the prosperity of the western world economy. This has become the aspiration and the 'Lost Dream' of most North-Africans who are seeking to live the 'El-Dorado' which is embedded in their naïve minds as the 'European dream'. Indeed, Morocco has the highest rate of 'Brain Drain' in North Africa and the second in the whole Middle East region, as a recent study has indicated.[30]

Brain Drain is another variable which is sonorous amongst Moroccan intellectuals, numerous studies and surveys claim a majority of Moroccan graduates dream of leaving the country seeking better career opportunities abroad because they believe that *„migration from Morocco is the only solution that will help them progress and develop their careers. The Moroccan minister of education admits the painful economic damages of 'Brain Drain' by noting that each year more than 600 engineers leave Morocco in search of better conditions and, ultimately, job satisfaction and*

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[26] Ceuta, Melilla profile 14 December 2018, https://www.bbc.com/news/world-africa-14114627 (downloaded 1 January 2019)

[27] MENA stands for: Middle East and North Africa.

[28] ENNAJI, Moha: Patterns and Trends of Migration in the Maghreb; Migration & the Maghreb, viewpoints special edition, the Middle East Institute, Washington DC, May 2010, p. 7, https://www.mei.edu/sites/default/files/publications/Migration%20Maghreb.pdf (downloaded 30 January 2019)

[29] DE HAAS, Hein: The impact of international migration on social and economic development in Moroccan sending regions: a review of the empirical literature; International Migration Institute, University of Oxford, 2017. Working paper 3.

[30] Heated debate in Morocco over brain-drain, The Arab Weekly news. https://thearabweekly.com/heated-debate-morocco-over-brain-drain#off-canvas (downloaded 3 January, 2018)

*better pay in a more academically – progressive environment.*"[31] In his speech on the occasion of the 65th anniversary of the Revolution of the people and the king (20 August 2018), King Mohamed VI pointed out that *"many young people in Morocco, especially university graduates in science and technology, are thinking of migrating, not only because of the tempting material incentives abroad but also because they do not find in their country of origin the appropriate conditions for employment, career advancement, innovation and scientific research."*[32]

Morocco as a weak state, is seen a transit gateway of both migrants and refugees to Europe. A massive number of young Moroccans have the willing to definitely leave Morocco, and to permanently live and work in other mostly liberal and democratic states. The European member states are on the top list of Moroccans choice and most wanted countries to both legally and illegally immigrate to. On the one hand, these youngsters' way of thinking has a geopolitical reason to occur, and on the other hand it is an alarming phenomenon for both hosting member states and Morocco as a transit gateway to Europe, since it reflects an abnormal situation as a real devastating epidemic inside the policy-making of such a rich, and yet immensely corrupted monarchy. This reveals a deep flaw in the common peoples' relationship with their dishonest – weak and failing kingdom. The reason for claiming so is definitely neither supported by the Moroccan failed regime nor based on any foundation, organization or official government inside Moroccan territory. Rather, this emperical claim is academically based on Transparency International and Fragile States Index surveys (21February 2017) in which Morocco ranks 81\180 countries in total, as one the worst performing states and most corrupted regime in the African continent and the Middle East.[33]

Basically, young active Moroccans flee abroad via two distinc methods. The first is a legitimate and authorized procedure, which is in fact highly restricted to a very limited group of people either by means of pursuing their international studies and to stay abroad after obtaining the residence permit or through investment opportunities for the lucky ones. However, the second very distinct method is irregular and internationally illegal by crossing the Strait of Gibraltar despite very dangerous weather, smuggling and trafficking innocent people through the Mediterranean via what is literally called in Moroccan language;"Boats of Death".[34] Hence, the second illegal method carries with it the most frustrated journey of hundreds of thousands of

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[31]  How to Turn the Moroccan Brain Drain into a Brain Gain, Morocco World news. https://www.moroccoworldnews.com/2018/07/251305/moroccan-brain-drain-morocco/ (downloaded 1 January 2019)

[32]  Speech on the occasion of the 65th anniversary of the Revolution of the People and king, Agence Marocaine de Presse. http://www.mapnews.ma/en/discours-messages-sm-le-roi/full-text-royal-speech-65th-anniversary-revolution-king-and-people (downloaded 3 January 2018)

[33]  Transparency International, Corruption perception index surveys, 21 February, 2018. https://www.transparency.org/news/feature/corruption_perceptions_index_2017 (downloaded 1 January 2019)

[34]  "Boats of Death" or "Bateaux de la mort" is a term used by Moroccans, Algerians and Tunisians, which stands for banned 'Boats' that smugglers illegally use shipping irregular migrants through the Mediterranean.

deaths every single year[35] due to massive number of Moroccans who wish to illegally migrate to flee mostly persecution, corruption and oppression of an authoritarian regime. Irregular migrants are the direct result of what they are exposed to. It is a reflection of a weak-failing regime with an absolute policy-making deficiency and a mirror-image of the most corrupted autocratic monarchy in the new millennium.[36]

The migration phenomenon varies from nation to nation in North Africa as has been discussed previously. However, the mentality of most Moroccans, Tunisians and Algerians towards various factors, as well as types of migration are the same due to geopolitical variables such as extreme corruption, oppression, lack of freedom and equity of treatment in such weak-failing states. The global ratio is beyond 70% of those wishing to immediately abandon their country of origin, this rate rises to more than 80% for young Moroccans, almost the same percentage in other Arab countries, notably in North African region.[37]

Moroccan community form not only one of the largest, but also one of the most dispersed migrant communities in Western Europe. Out of a total population of 40 million, over 5 million individuals of Moroccan descent lived abroad in 2004. The latest statistics must be showing a higher number because of undocumented migrants. Moreover, this does not include the approximately 400,000 Jews of Moroccan descent living in Israel. France is home to the largest legally residing population of Moroccan descent (more than 1,105,000), followed by Spain (424,000), the Netherlands (300,000), Italy (299,000), Belgium (293,000), and Germany (102,000). Smaller communities live in Scandinavian countries (17,000), the United Kingdom (50,000), the United States (100,000), and Canada (70,000) (de Haas 2005a; Fargues 2005). [38]

Over the past three decades, starting from the beginning of 1990 until the present time, more than 5.5 million Moroccans have left to different European member states. Take Spain, for instance was an exporter of labor after the civil war of the 1930s, four decades later Spain will become one of the world's leading labor-receiving countries. Nearly two millions of Moroccans have arrived in Spain within less than three decades.[39]

Whilst Morocco is distinguised by instability and insecurity, which is quite a baffling rumor and paradoxical, because of the international security demands to social stability that does not happen in the case of Morocco as a weak state. In the

[35] BBC News: Migrant crisis: Life and death on a Spanish rescue boat in Mediterranean, 29 August, 2018. https://www.bbc.com/news/in-pictures-45209586 (downloaded 1 January 2018)

[36] WikiLeaks cables accuse Moroccan Royal family of corruption, WikiLeaks, Friday, 11 December 2009. http://www.crethiplethi.com/wikileaks-moroccan-royals-accused-of-corruption/usa/2011/ (downloaded 1 January 2019)

[37] World Migration Report 2018. Migration and Migrants: Regional Dimensions and Developments, International Organization for Migration, the UN Migration Agency, p. 45-51.

[38] Focus Migration 2009. http://focus-migration.hwwi.de/uploads/tx_wilpubdb/CP_16_Morocco.pdf (downloaded 1 January 2019)

[39] BIDWELL, R.: Morocco under Colonial Rule. French Administration of Tribal Areas 1912-1956. In: International Journal of Middle East Studies. 1976/2. pp. 310-312. http://focus-migration.hwwi.de/uploads/tx_wilpubdb/CP_16_Morocco.pdf (downloaded 5 January, 2019)

light of the peculiarities of Morocco's territory as a land rich in natural resources, fishery above the Mediterranean and the Atlantic Ocean, as well the world's second biggest producer of phosphates by more than 75% of the world reserve, and yet possessing a strategic geopolitical location on the tip-top of northwestern Africa (Morocco News Board, Feb. 2013).[40] Dramatically, Moroccans fear of the oppressor – undemocratic regime (Brand, L 2002), opt for liberal and democratic states to legally, as well as, illegally immigrate to; Canada most specifically for Brain-Drain – intellictuals and due to its attraction in the first place, followed by Germany which is in fact considered an ideal state of freedom and democracy in the eyes of Moroccans, so far Spain and France for colonial, historical and geopolitical reasons.[41] In fact, the Moroccan young generation's desire to migrate is generally directed towards 'Western Liberal and Democratic' countries and they have no intent to live or stay in regions of the middle East or the richest Gulf states.

Moroccans want to abandon their homeland illegaly and by whatever it takes. They risk their lives in the Mediterranean sea, they withdraw and deny their nationality, and yet get red of their identity upon arrival to the fisrt European member state. It is all due to the collapse of basic vital sectors, lack of all types of security, and yet the king himself recognizes the failure of his government. Additionally, the lack of political practice, and revoking freedoms are further severe motives forcing young Moroccans to flee persecution of the ruler, the victimization of secret police, the oppression and corruption of political parties in a weak-failing state. Hence, the state has recognized its numerous failures of its adopted French models; moreover, the absence of a real ambitious reform along with a backup plan besides the failure to import convincing alternative models to embed crucial sectors for the sake of a social and democratic development.

Morocco's state contribution persists in being among the lowest globally in comparision to its population. Thus, all types of illegal migration have emerged to be the primary wellspring of peoples' Elysium-Dream. Paradoxically, the Moroccan state's intention towards privatization policy is to put an end to different vital public sectors attempting to suspend job opportunities despite thousands of needs within all levels such as education, health care, management administration and a lot more.

Indeed, Morocco officially gained independence on 2 March 1956 after the signing of a joint declaration in Paris to replace the Treaty of Fes which has established the protectorate in 1912. For 63 years since its independence, the ruling monarch has neither registered a real democratic progression nor achieved any economic prosperity, rather Morocco is classified as economically a backward country, with a very poor education system, which is not considered as a priority at all, besides the worst health care system in the region, in fact, the health care sector is in a catastrophic condition as if the country has recently come-out from a civil war. All in all, Morocco as has been stated is amongst the most corrupted states worldwide according to World Bank and Transparency International. It goes without saying that law-abiding and moral states are those that give a special prominence to freedom,

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[40] Transparency International: People and Corruption: Middle East and North Africa Survey, 2016.

[41] BRAND, Laurie A.: State and Their Expatriates: Explaining the Development of Tunisian and Moroccan Emigration-Related Institutions; The Center for Comparative Immigration Studies, University of California, San Diego, Working Paper 52. 2002.

competitiveness, modern and creative education, excellent health care system for all and democracy, alas Moroccan despotic regime has utmost deficiencies in all its vital institutions and failing system for the reason which Morocco is regaded as a weak state.

The regime suffers acute absence of the political-well and practical strategies besides the deficiency of policy-making expertise regarding the redistribution of wealth among its citizens to achieve social equality by establishing serious goals and objectives to put an end to looting, greedy monopolies and corruption which make all prospects vanishing. The 21st century enterprise of especially young Moroccans to abandon Morocco is not limited to the realization of just a simple dream, on top of that, it is a daily vivid oppression which is not limited to poor ordinary people, but also reaches the middle-class and those living abroad and still own properties in their supposed homeland Morocco that are absolutely not satisfied with the regime's corrupted and most gluttonous policies.

**Conclusion**

Unlike Syrians who are fleeing war and torture, Moroccans are fleeing a mixture of hybrid threats, and yet dramatically causing hybrid threats to EU member states. They have to make the most dangerous journey in their life, which means that for humanitarian reasons it is extremely complicated for EU member states to send them back. The major issue is that not all European member states have an interlocutor to deal with and take part in international relations, indeed what aggravates the situation is the North-African governments which are highly corrupted and in which Morocco tops the list. It is the main and finest reason pushing mostly the young generation to flee their homeland. In October of 2016, the German Chancellor Angela Merkel made a visit to Mali and Niger as key transit-points for illegal migrants from the regions of sub-Saharan Africa who forcibly attempt to reach the Maghreb and then cross the Mediterranean to enter Europe. Mrs. Merkel introduced financial packages to support the sub-Saharan regions' security and migration issues. Her diplomatic aim was to convince their governments to prevent their people from getting any further by committing fatal suicide at the Mediterranean Sea. However, this kind of diplomatic cooperation requires a lot of infrastructure, a lot of manpower and a lot much more of expertise in all of Africa as the youngest continent by population and the biggest by its states number. Nevertheless, the African leadership is only interested in getting rid of their most intellectual, independent and well-educated people. Hence, sending those young men and women to Europe is one way to easily dispose of their burden. At the present time, not all EU member states seem to be interested in working together in the way that could provide better results. Otherwise, the final solution for this phenomenon is remarkably complex; it is not going to occur necessarily any time soon, but preferably sooner than later. Thus, more and more uninformed individuals will continue to making this deadly journey, which indeed is inevitably threatening the security, as well as, the stability of the European existence.

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ZSOLT FEJES – SÁNDOR MIHÓK

# THE ROLE OF MEDICAL INTELLIGENCE IN THE PROCESS OF DEFENSE STRATEGY DEVELOPMENT DURING THE COVID-19 PANDEMIC

*Abstract*

In 2020, with the outbreak of the COVID-19 pandemic the modern world faced a challenge that has put our health care preparedness to the test, shaken our sense of security, and shown our vulnerability. The global health emergency declared by the World Health Organization (WHO) on March 11th 2020 affected all continents and the entire population of the world. We have just begun to feel he immediate consequences of the pandemic, and are only guessing its future progression, while the actual damages will only be assessed by upcoming analyses. The events of our present time have shown us that similar occurrences are very likely to happen in the future as well; thus, we need to develop defense strategies, that is, we need to plan our future. This article provides readers with a general assessment of past pandemics with relevance to COVID-19. We will also give a brief overview of the present pandemic's outbreak, spread, and the effectiveness of the defense strategies that have been put in place. In relation to the ongoing pandemic, we will make recommendations on the importance of medical intelligence, defense strategy development tasks, as well as the military strategy and military health planning tasks that may help prevention or mitigation (in case of another outbreak) in the future.

*Keywords***:** pandemic, health emergency, intelligence, medical intelligence

## Introduction

*"Intelligence, security and global health are distinct conceptual domains with a long history of overlapping priorities and, often, clashing interests. In the last few years, the interfaces of these sectors have been very much prominent in the public arena as disease and insecurity have become increasingly intertwined in a globalised system. A clear framework must be outlined to ensure the fields of health, security and intelligence can coexist and overlap harmoniously."*[1]

This article has been motivated by the spread of the COVID-19 pandemic, which broke out in 2020 and has since spread to all countries of the world, resulting in the declaration of a global health emergency. We provide an overview of the reactions and responses of the major international organizations (NATO, UN, EU) and of the countries affected by the pandemic, their open medical intelligence activities and the defense strategies that have been deployed. The purpose of our analysis is to draw

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[1] BOWSHER, G.– MILNER, C.– SULLIVAN, R: Medical intelligence, security and global health: the foundations of a new health agenda, Journal of the Royal Society of Medicine; 2016/7. p. 269. https://journals.sagepub.com/doi/pdf/10.1177/0141076816656483 (downloaded 15 May 2020)

attention to the key role played by the Hungarian Defence Forces and two professional areas within it – namely, intelligence and health care – in the indirect processes of prevention and strategy development. We would like to emphasize that all ideas and recommendations presented by us in this article shall only be interpreted and addressed in the context of the COVID-19 pandemic.

### Virus pandemics throughout known human history

The coronavirus behind COVID-19 (coronavirus disease 2019) is by far not the first pandemic-inducing virus that humanity must deal with. We are now going to provide a brief overview of the most significant pandemics to date.

#### Smallpox

The so-called first Antonine "plague" outbreak (165–180 CE) – which is consistently referred to as "plague" in Hungarian academic literature – was much more likely caused by smallpox based on the symptoms described by Galen.[2] The first outbreak claimed 5 million lives, and the second one (in Japan, from 735 to 737 CE) claimed 1 million lives. From the 16th throughout to the 20th centuries approximately 56 million people died of smallpox (considering the confirmed cases only); however, some epidemiological statistics put that number to 300 million. Humanity successfully eradicated this disease, and by 1980 it has disappeared from Earth. Smallpox – the early symptoms of which are vomiting and fever, later on followed by skin lesions – had a death rate of 15 to 20% in Europe and 40 to 80% in America, and survivors often did not fully recover. In a third of the cases, the most common consequence was blindness. In the 18th century, smallpox claimed 400,000 lives a year and affected a number of monarchs, and it still presents a certain danger, as great powers considered it as a primary biological weapon during the Cold War. A medicine used to heal smallpox was approved in 2018, in case it would appear again.

#### Spanish Flu

The hemagglutinin 1 neuraminidase 1 (H1N1) type influenza virus, which first appeared in Kansas (United States) in spring 1918, and was later transmitted by US soldiers enlisted to fight in the First World War on the European front has struck the world in three waves in a span of less than 2 years. This type of influenza struck not only the elderly, and often produced haemorrhagic pneumonia. Its exact death rate as well as the exact number of victims are still unknown; however, even the most conservative estimates put the number of victims to 17 million, while other sources mention 40–50 million, or even 100 million victims – thus, this rapidly spreading pandemic was one of the deadliest the world has ever seen. The late 19th century Russian flu also belonged to this group of influenza viruses (H1N1), the same way as the Asian flu of the 1950s (H2N2) and the Hong Kong flu of the late 1960s (H3N2), each killing millions of people.

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2   GRÜLL, Tibor: „Könyörögjenek a halandók jó orvosságért!" – Róma Antoninus-kori járványa (Let mortals beg for effective remedies! – The Antonine plague in Rome), Újkor.hu – A velünk élő történelem (Újkor.hu – The history that lives with us), http://ujkor.hu/content/konyorogjenek-halandok-jo-orvossagert-roma-antoninus-kori-jarvanya (downloaded 15 May 2020)

*Polio/Epidemic Child Paralysis (Poliomyelitis)*

The disease caused by poliovirus may provoke paralysis; however, only 1% of the cases results in permanent paralysis. The virus started to spread more rapidly from the 1900s, and by 1950s, case numbers of the paralytic disease have reached alarming proportions. Full rehabilitation of the paralysis developed during the disease is not yet possible; thus, the only effective way to protect people against the disease is to prevent it by immunization (by the Salk vaccine or Sabin drops).

*Ebola*

The disease – which can spread from live or dead bats to humans as well – was first documented in 1976 in present-day Democratic Republic of Congo (back then Zaire). Its symptoms include a haemorrhagic fever, which is later on followed by organ failure and the collapse of the circulatory system. For four decades, there was no cure at all for ebola, resulting in a death rate of 50 to 90%. The vaccine for the virus has been developed in the wake of the 2014 West African ebola epidemic. This means that the much-feared ebola has been finally overcome by humanity, provided that the medicine reaches the infected in due time.

*SARS (Severe Acute Respiratory Disease)*

This virus belongs to the family of coronaviruses (CoV) that is behind the current pandemic; its outbreak in the early 2000s claimed relatively few (a few hundred) lives. Its spread is associated with bats and civets. This mode of transmission is also assumed at the beginning of the COVID-19 pandemic, which (probably) occurred in China. It is to be noted that coronaviruses have been the subject of clinical and research studies since the 1980s.

*HIV – AIDS (Human Immunodeficiency Virus – Acquired Immunodeficiency Syndrome)*

AIDS was first documented in 1981, and since then about 25 to 35 million people have died from the disease. Patients with AIDS suffer from symptoms that cause only a mild illness in individuals with healthy immune systems (examples are opportunistic infections and Kaposi's sarcoma).[3]

*Definitions*

As a result of the global threat posed by the coronavirus pandemic that started in 2020, an urgent need has arisen to gather intelligence – in the present case, health-related information – as soon as possible, and to analyze and evaluate it from a medical professional point of view. This information processing is aimed at devising effective measures of prevention that may reduce the current threat (which may persist for several years still). But how can we nowadays define medical intelligence as an entity?

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[3]   VÁRADI, András– FERENCI, Tamás – FALUS, András: The coronavirus-induced COVID-19 pandemic – Previous experiences and scientific evidences at the end of March, 2020, Orvosi Hetilap 2020/17. p. 646. https://akjournals.com/view/journals/650/161/17/article-p644.xml (downloaded 15 May 2020)

Will current events lead to an expansion of this area of our profession, so that its activities will also deal with finding answers to questions of civilian life, or will it eventually transform into an independent profession as a result of the threat which may become permanent? The answers to these questions are currently not yet known, but we can safely say that the development of defense strategies is inconceivable without a significant involvement of medical intelligence. Hungarian experts define intelligence as follows: *"Intelligence is a state-organized, institutionalized fact-finding activity aimed at supporting government decisions with information, by means of secret and open information gathering and by processing (analyzing and evaluating) the information obtained with a view to identifying threats, risks, dangers and challenges to national security."*[4] This definition is so precise and comprehensive that it can be applied with full relevance to medical intelligence as well. The authors of a 2010 article on the health risks of the mission in Afghanistan defined medical intelligence as follows: *"a category of intelligence that consists of the collection, evaluation, analysis and interpretation of medical, biological, scientific, epidemiological and environmental information. It also entails the assessment and evaluation of (both military and civilian) foreign medical capabilities."*[5]

The United States Defense Department (Department of Defense) uses the following definition: *"That category of intelligence resulting from collection, evaluation, analysis, and interpretation of foreign medical, bio-scientific, and environmental information that is of interest to strategic planning and to military medical planning and operations for the conservation of the fighting strength of friendly forces and the formation of assessments of foreign medical capabilities in both military and civilian sectors. Also called MEDINT."*[6] With regard to the topic of this article, it is also necessary to define the concept of "pandemic", which has become one of the most frequently searched words on Internet browsers, along with the formerly lesser-known "coronavirus". Pandemic is a Greek compound word, consisting of the word "pan" (=all) and "demos" (="people, nations"), in reference to the fact that the disease affects many people and all geographical areas.

The word "endemic" is used to describe a situation when a contagious disease is spreading within a well-defined geographical area. Considering the phases of the coronavirus pandemic, the endemic phase was the period when the disease was limited to the city of Wuhan in China. The spread of the virus within China – which marked a new phase in the progression of the disease – has also resulted in a change of its definition to epidemic, whereas it has become a pandemic when it appeared and started to spread in many countries on all the six continents of the world. This means that in case of a pandemic, the spread of the disease concerns large numbers of people in multiple countries and continents, perhaps even on the whole world. Declaring pandemic status is the responsibility of the United Nations' World Health Organization (WHO). The 1918 "Spanish flu" influenza outbreak was also a

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4   RÁCZ, Lajos: Mi a hírszerzés? (What Is Intelligence?) https://www.knbsz.gov.hu/hu/letoltes/fsz/2010-3-4.pdf (downloaded 15 May 2020)

5   SÓTÉR, Andrea – SIMÓ, Andrea: Az afganisztáni misszió egészségügyi kockázatai, a saját csapatok egészségügyi haderővédelme (The medical risks of the Afghanistan Mission and the medico-military and health protection of own troops) https://www.knbsz.gov.hu/hu/letoltes/fsz/2010-3-4.pdf (downloaded 15 May 2020)

6   https://www.militaryfactory.com/dictionary/military-terms-defined.asp?term_id=3315 (downloaded 15 May 2020)

pandemic, killing about 3 to 5 percent of the world's population at the time, and the ongoing spread of the coronavirus is also a pandemic.[7]

**The start and spread of the COVID-19 pandemic**

In December 2019, a novel coronavirus emerged in Wuhan City, China. Since then the virus has spread to 208 countries and territories including Africa, America, Asia, Australia and Europe. Since then the virus has shown evidence for human-to-human transmission as well as evidence of asymptomatic transmission. On January 30th 2020 the WHO declared a Public Health Emergency of International Concern. The disease was formally named COVID-19 on February 11th. The virus itself has been named SARS-CoV-2. On March 11th 2020 the WHO characterized the disease as a pandemic.

When the COVID-19 outbreak was formally declared a pandemic on March 11th, already a large number of cases have been reported continuously on all the six continents of the world. On that day, there were close to 5000 confirmed cases in South Korea, over 2000 confirmed cases in Italy; however, no confirmed cases were known in Russia, and Turkey just reported its first patients who tested positive for the virus. By then, the first wave of the virus has practically ended in China, with merely 31 new cases being reported on that day in addition to the over 80,000 cases that had been reported previously. The first infections in Hungary were reported just 6 days before the declaration of the pandemic. On March 11th, the total number of diagnosed and reported cases was 12. In the meantime, the virus has started to spread in multiple countries (at first in local hot spots) in an exponential manner.

At the time of the writing of this article there are reportedly a total of over 24 million people who have been registered as affected by the infection in 208 countries and territories of the world. The countries and territories with the highest number of confirmed cases and patients are currently the USA, Brazil, Mexico, Peru and Chile (in the Americas), Spain, England, Italy, Germany and France (in Europe), South Africa, Egypt, Nigeria, Ghana and Algeria (in Africa), India, Iran, Saudi Arabia, Pakistan and Bangladesh (in Asia), as well as Australia, New Zealand, Guam, Papua New Guinea and French Polynesia (in Australia and Oceania). Russia ranks 4th on the list of affected countries, whereas Turkey ranks 17th. On the same list, Hungary ranks 101st with little over 5,379 confirmed cases and over 614 deaths. Regarding European countries, Hungary is followed by Slovakia, Slovenia, Lithuania and Estonia.[8]

**The relationship between the pandemic and defense strategy development tasks**

By declaring the coronavirus epidemic a Public Health Emergency of International Concern (PHEIC), the WHO has created a global opportunity to make

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[7]    https://lexiq.hu/pandemia (downloaded 15 May 2020)

[8]    WHO Coronavirus Disease (COVID-19) Dashboard (Data last updated: 2020/8/28, 4:33pm CEST) https://covid19.who.int/table (downloaded 28 Aug 2020)

recommendations to its member countries on how to deal with the epidemic going forward. Contrary to the experience of the H1N1 pandemic almost two decades before, when – according to experts and critics – the organization too hastily declared a pandemic, this has rather turned out to be an advantage in the situation at hand. By doing so, the WHO made it clear not only to national health care decision-makers but also to the general public that the disease will continue to spread inexorably for some time, and also that global and national strategies will need to be devised and implemented as soon as possible to stop its spread and mitigate the consequences.

In its rapidly devised campaign, the WHO focused on its awareness-raising and educational activities by trying to provide people all over the world with information on the disease. The organization has run a comprehensive and effective campaign on hand washing, cleaning hands and surfaces, as well as on the behavioral etiquette needed to reduce the spread of upper respiratory illnesses. Although ex-post analyses and critical voices, on the other hand, consider the WHO's position on mask use as flawed, it is undeniable that most governments adopted and enforced the organization's standpoint by postponing mass events, enforcing physical distancing rules, encouraging work-from-home arrangements and by the closing of schools, and the effectiveness of the measures took a positive turn. From a health care planning and clinical point of view, the organization's recommendation to free up hospital beds for dedicating them to the treatment of COVID-19 patients and to postpone all elective surgeries has also quickly become very important, becoming in fact a planning element in almost all affected countries' defense strategy.

As a result of today's defining environmental challenge that turns everything upside down, both short-to-mid-term and long-term global and national strategies had to be devised in a relatively short period of time. Given that the pandemic has affected each country differently, the above-mentioned strategies likewise set different objectives, see for example the initially very different epidemiological management objectives of South Korea vs. Sweden. Countries affected by the pandemic showed significant differences not only with regard to their strategy objectives, but also regarding the time when those strategies had been devised. Asian countries, for example, had significantly less time to devise strategies, unlike countries in South America.

The time when those strategy ideas were conceived could be examined in a separate analysis, as well as the severity of the restrictive measures included in those strategies, and even more so the analysis of the effectiveness indicators of pandemics management as evidenced by objective figures. In this regard, the example of Peru is salient: even though Peru devised its plans and implemented them in due time; by now, it has become one of the most severely affected countries. (Up to August 28th 2020 Peru had 613,378 confirmed cases and over 28,000 deaths, ranking 6th in terms of severity among the countries of the world).[9]

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[9]   WHO op. cit.

**The relationship between medical intelligence and defense strategy development**

As we have seen, the pandemic has caught multiple – politically, economically and militarily – influential countries off guard in many respects. This fact clearly underlines the importance of intelligence and reconnaissance, which can effectively help proactive preparation. From a military point of view, it can play an important role first of all in the medico-military protection of the fighting forces, while it can also contribute to the development of health protection strategies for the civilian population. And since it has both military and civilian relevance, it can also effectively contribute to the development of other – complex – social and economic protection measures. In relation to the pandemic, parallel rights, obligations and tasks have appeared simultaneously in both the civilian and military spheres.[10]

These tasks required strategic planning, the preliminary information needs of which could only be satisfied by the provision of medical intelligence data. Below are just a few examples of the parallels that exist between the civilian and military spheres:

- One of the most important tasks of a state is to protect the health of the civilian population. The medico-military protection of the fighting forces is a guiding principle that appears in parallel. It means the protection and preservation of the living forces, so as to ensure the continuous provision of military capability.[11]
- It is also the responsibility of the state to ensure the return of its citizens stranded abroad in an emergency situation. The Hungarian Defence Forces – based on a decision by the Government or the National Assembly[12] – station a certain proportion (a certain number) of the military personnel abroad to carry out international military missions. It is also a task of the state to provide full care (including health insurance coverage, travel, personal

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[10] Example: the right to health includes the right to the highest achievable level of (physical and mental) health, rights related to maternity, childbearing and reproduction, the right to protection against epidemics and diseases, the right to access health care services. DRINÓCZI, Tímea: A szociális jogok: nemzetközi kitekintés, nemzeti gyakorlat és alapjogi jelleg (Social Rights: An International Perspective, National Practices and their Nature as Quasi-Fundamental Rights), MTA Law Working Papers 2018/4., 2.4. https://jog.tk.mta.hu/uploads/files/2018_04_Drinoczi.pdf (downloaded 15 May 2020)

[11] The definition provided by French Emperor Napoleon I is still relevant: *"A soldier's health must come before economy or any other consideration."* Joint Publication 4-02 Joint Health Services 11 December 2017 Incorporating Change 1 28 September 2018. https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp4_02ch1.pdf (downloaded 15 May 2020)

[12] Pursuant to Article 47 of the Basic Law of Hungary, the decision-making power regarding the deployment of the Hungarian Defence Forces abroad is shared between the Government and the National Assembly. The Government can decide on the participation in NATO and European Union operations, while any other international military action is decided by the National Assembly. A Magyar Honvédség békefenntartó missziói, 2., Infojegyzet, 2017/49., https://www.parlament.hu/documents/10181/1202209/Infojegyzet_2017_49_MH_misszio k_2.pdf/ab17dc18-6ce7-47e2-99b9-1b4638cf3bf0 (downloaded 15 May 2020)

protective equipment etc.) for the members of such contingents, even if mission participants serve in an international force.

One of the basic requirements for developing both global and national strategies is to dispose of relevant, credible and up-to-date information. Looking at the scope of COVID-19-related events (both in time and space), the number of affected countries, the large number of infected people, the number of people who died because of the pandemic, as well as the economic, political and social impact of the disease, the importance and responsibility of medical intelligence cannot be overstated in the process of strategy planning. However, considering the vast dimensions of medical intelligence, as well as its tasks and the composition of the personnel responsible for carrying out those tasks, it is evident that so far, its activities have mostly been tied to military events and operations, and also that it had a much more low-key representation in civilian life. As a result of the COVID-19 pandemic, this has fundamentally changed, which can be thought-provoking for any military leadership in the present and the future when it comes to the planning of future tasks, relationship-building and planning the military's organizational structure.

### The Hierarchy of Defense Strategies

The process of developing defense strategies is simple and logical, provided that there is sufficient time to develop such strategies.
International and/or regional strategies are devised within the framework of globally defined tasks, tools and objectives. Logically, such strategies determine the actions to be carried out in a significantly narrower framework, with the aim of achieving the desired global objective.

Affected countries include these objectives in their national strategies, which are adapted to the circumstances and possibilities of each nation. National strategies are then further narrowed down to professional strategies, determined by the subsystems shaped by public policy guidelines and the available skill sets. The most important determinants of the latter are the skill components that can be used to achieve the stated goals by the time specified in the strategic plan, and which are readily available or can/shall be acquired or developed in order to achieve the strategic objective.

***Figure 1: Global Strategy***
*(self-edited)*

**The characteristics of the various phases of defense**

We grouped tasks of strategic-level reaction/defense during the current pandemic into three chronologically different phases (which, however, sometimes do overlap). (For the purpose of a general analysis of reactions and responses, we recommend that distinction be made between the terms "reaction" and "defense". We resort to such distinction particularly when pondering military strategy or military health planning tasks, and it should be noted that we use the term "defense" to refer to the period before the event, and the term "reaction" to refer to the subsequent period.)

Emergence of strategies in the different phases of defense during the COVID-19 pandemic:
- Strategies emerging in the phase of **proactive** defense,
- Strategies emerging in the phase of **active** reaction,
- Strategies emerging in the phase of **retrograde** reaction.
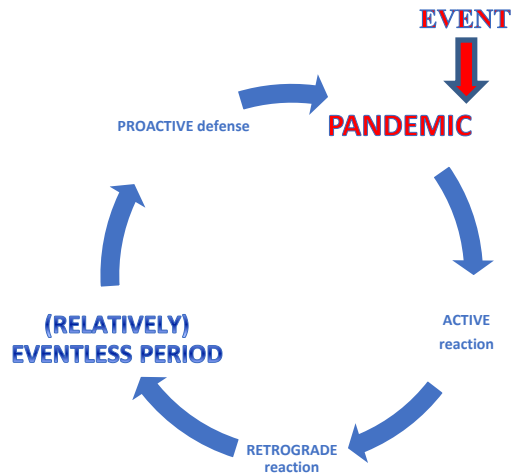
*Figure 2: Emergence of strategies in the different phases of defense during the COVID-19 pandemic*
*(self-edited)*

     The process of reaction/defense is cyclical in the case of this pandemic, too, just like in case of preparing for tasks arising from an earthquake, the eruption of a volcano or some weather disaster. The cycle's starting/initial element can be anywhere on the timeline between proactive defense and active reaction, depending on whether the challenge that we are facing is a known/expected one or yet unknown and/or unexpected.

**Characteristics of the "Event" phase**

     In case of the COVID-19 pandemic, the occurrence of the event can be dated to December 2019 – January 2020. However, there is no evidence that the event or its active reaction phase in China has not already started in the autumn or winter of 2019. (For this reason, we deem that it is more appropriate to use the term "public event point".)

     What questions had to be answered during the short-lived "public event point" phase in December 2019 and January 2020?
When we first heard about COVID, the following questions needed to be analyzed:
- What does the virus cause? Does it cause a curable or an incurable disease? Fatal or not?
- What can be the potential consequences? Will individuals, groups or even masses of people be affected by or die from it?
- Who is in danger? Everyone? Or only children, young people, adults and/or the elderly?
- Can we protect ourselves from it? If so, how? If not, why not?

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- What is the origin of this disease? Is it natural or artificial?
- Do we know anything about its history? Do we know at least a similar disease? Do we already have any experiences with it?
- In what parts of the world does it cause a disease?
- How does it spread?
- Can we expect that it will reach us as well? When? In how much time? In what ways?
- How is it currently treated?
- Who is able/willing to provide credible information?

**Characteristics of the "Proactive Defense" phase**

In the period between December 2019 and March 11th 2020 (the official declaration of the pandemic) information provided by medical intelligence services was crucially important, taking into account that in this phase relatively large amount of openly-sourced (and unverified) information was available on the nature, characteristics and – first of all on the – spread of the coronavirus epidemic affecting Wuhan City (China). The weak point in this phase is the lack of pre-determined evaluation criteria, which was characteristic of this preparation phase. At the same time, there was large-scale information gathering, which resulted in the possible use of sources that were later found not to be legitimate and/or unreliable and/or out of date. The inherent risk is that the need for quality information might not be fully satisfied; therefore, the process of strategy development may be delayed, or deviate from the desired orientation.

The two main pillars of medical intelligence, i.e. data analysis and data evaluation were put under increasing pressure, since they had to deal with the increasing amount of incoming information.
Data analysis has primarily focused on the criteria of the medical profession during the satisfaction of the information needs of the political and military leadership on the one hand, and civil society on the other hand. In most cases, general considerations focusing on the foreseeable economic or political consequences of the event were much less present. The results obtained were clearly aimed at satisfying the information needs of professionals. Public data sharing and/or provision of event-related information to the civilian population was typical, but its communication did not really reach the desired effect. The objective of this process would have been outlining and developing strategic ideas on the basis of actual, real-time data; however, rapidly evolving events and the growing geographical spread of the virus put it at a disadvantage.

**Characteristics of the "Active Reaction/Defense" Phase**

The active reaction phase started in February 2020 and globally it is still ongoing. Some countries (such as Brazil or the USA) are at the beginning of this phase, while other countries (for example Britain and Russia) are at the end of it. The elements of this phase are founded on the strategies that have been developed on the basis of the results obtained during the previous phase. In this phase as well, a large

amount of openly-sourced information is used; however, the ratio of information gathered from authoritative or verified sources becomes predominant. Compared to the previous period, both data analysis and data evaluation are more precise, and continue to be a key pillar of the process.

Evaluation criteria are targeted, with data analysis clearly focusing on professional aspects during the satisfaction of information needs, including the analysis of important and substantive professional aspects. General political and economic considerations are more frequent and gain in importance. The scope of stakeholders participating in internal communication processes has become noticeably wider, and the aspects for an analysis of other questions related to the health effects of the pandemic have also emerged.

Unvalidated, not legitimate and out-of-date information has gradually been removed from the scope of information gathering; therefore, the risk of a disorientation of the strategy development process has significantly decreased. The results obtained satisfied not only the information needs of professionals, but also that of other (economic, political, military etc.) strategy-makers.

It is fair to say that regarding COVID-19, the axis of medical intelligence has clearly shifted to:
- analyzing the spread of the disease;
- examining the international and national plans and strategies implemented by the affected countries;
- analyzing the relevant professional protocols and recommendations;
- as well as to analyzing the results of the various possible interventions.

In this phase, there was significantly less emphasis on:
- therapeutic interventions and options;
- and monitoring of post-treatment protocols and tasks aimed at eliminating negative health consequences.

As the process went ahead, narrower and more in-depth professional information has become increasingly more important, for example information on the pathogen and its genetic structure, its anatomical and physiological properties, as well as professional information on research into possible vaccines, the making of a vaccine, as well as therapeutic models.

**Characteristics of the "Retrograde Reaction/Defense" phase**

Countries that disposed of a wealth of information on the first wave of the pandemic and effectively processed the early experiences, such as China, South Korea, Japan and New Zealand, gained more in-depth experience in implementing complex defense strategies. These countries have started to prepare for the next cycle – based on the most up-to-date information – immediately after the end of the first wave. Most countries in Europe (including Hungary, Italy, Czechia, Slovakia and Poland) are currently waiting for the beginning of a second wave of the pandemic between the retrograde and proactive phases, with having either no or only a very

short-lived eventless period. Other European countries (such as Roumania, Bulgaria, Bosnia and Herzegovina, Serbia) are much less fortunate, since they are still in a rather protracted "active defense" phase, which is really putting a strain on their resources in all respects. Thus, these countries cannot really distinguish the two waves.

Professional elements in this cycle of strategy development are also devised and constantly updated based on the results of the previous phase. The aspects of data analysis and data evaluation have an increasingly narrower focus on professional elements that can influence the processes of long-term strategy development. The analysis of the processed experiences becomes a dominant element of the strategies, as well as the comprehensive education of the affected target population and their preparation for another event. During the defense phase, the proportion of openly-sourced information is likely to decrease further, and will be replaced by the international experiences that will be shared.

**Observations**

Despite the fact that the COVID-19 pandemic is an event with a global impact and that it needs to be managed internationally, the quality and standardization of the related information (especially in the first 2–3 months following the outbreak of the pandemic) did not reach the desired or expected level at almost any leading international organization. Although openly-sourced information and data available on the Internet started to appear relatively quickly and abundantly, their collective and systemic benefits were, in our view, extremely limited. That was mostly due to the uncertain credibility of the sources, the unstructured publication, as well as the incredibly large pool of very rapidly changing and often contradictory information.

On the basis of both Hungarian and international military experience, it can be stated that during the COVID-19 pandemic, major international civilian or military organizations (such as the UN, EU, NATO) as well as the relevant Hungarian authorities failed to put adequate emphasis on the elements of proactive defense in the initial epidemic phase (in December 2019 and January 2020). However, this fact did not delay the development of defense strategies, but has rather changed the nature of the overall strategy, orienting it towards a defensive direction.
As we have been continuously following the events of this pandemic, we would like to emphasize the importance of two additional and very important factors, both of which could significantly facilitate the communication of the need for defense strategies and their key pillars to the relevant stakeholders. One is the issue of the quantity and quality of relevant information, and the other is the issue of substantive professional communication. These two domains/issues had a crucial role in the development of any strategic framework examined by us and based on the results of medical intelligence, whether at the national or the international level.

The creation and management of highly publicized databases for monitoring the spread of the disease and the number of affected people on a daily basis is carried out and coordinated by international (e.g. the WHO, ECDC) and national (e.g. the CDC) organizations, institutes and universities (such as the Johns Hopkins University). Data published at the beginning of the pandemic – in January and February 2020 – showed significant differences in the reported number of cases. The reasons for this are

perhaps simple, such as initial communication errors, or potentially the use of different protocols, or deviations from certain standards. The large amount of unstructured information originating from unverified sources and in a short period of time not only made the process of implementing defense strategies more difficult, but – in some cases – also made it contradictory, as well as their credible and effective communication. Sometimes that was the case even at large international organizations. An example for this is the globally communicated WHO strategy on mask-wearing, which even in April 2020 advocated that the use of face masks is unnecessary.

**Conclusion**

The coronavirus pandemic has clearly pointed out the need for close and effective cooperation between the competent organizations, primarily within the system of the Hungarian Defence Forces. However, the same need has also become apparent with regard to other partner organizations of the Hungarian Defence Forces. This also raises the following questions for both the short and medium term: In what structure should future strategic and operational planning tasks be carried out? Who should be involved in them? What type of cooperation is needed? What task system should be used?

The creation of databases with appropriate content and the preparation of complex reports and analyses are tasks of this new frontier area, which in most cases require cooperation not only between the competent national services, but usually also at the international level. The general criteria for reports containing medical intelligence data do not differ significantly from the criteria of reports containing non health-related information.

In the near future, we need to have individual, national and military strategies, and protocols based on them, as well as appropriate operational and health insurance plans. All of these are based upon the acquisition and correct processing of authoritative information and credible professional cooperation with the organizations relevant for such tasks.

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ATTILA NÉMETH – SÁNDOR MAGYAR

## AN INVESTIGATION OF DATA USED TO SUPPORT CONTACT TRACING TO CURB THE SPREAD OF COVID-19 PANDEMIC FROM THE ASPECT OF POSSIBLE NATIONAL SECURITY APPLICATION (PART 1)

*Abstract*

The aim of the study is to determine to what extent the data managed, stored in information systems or accessible by certain transformations can be used to support contact tracing, which state and which data sources can be used to achieve the goal. The data collected by the contact tracing applications can only support the activities of the national security and law enforcement agencies - in case of appropriate legal authorization - if the solution ensuring centralized data management is applied. In the case of centralized data storage, if the circle of contacted persons can be effectively identified. If the data belonging to the satellite positioning service are also available, then in addition to the fact and time of the connection, it is also possible to find out exactly where the meeting took place.

*Keywords:* Covid-19, mobile applications, data management

One of the most effective means of curbing the pandemic caused by the spread of the Covid-19 virus is the isolation of persons who have caught the virus and fallen ill to prevent, or reduce further infections. The virus is capable of infecting during the incubation period of the disease, therefore an infected person may unknowingly infect others.[1] During the incubation period, identifying individuals who have been in contact with an infected person and potentially exposed to the infection is a challenging task for contact tracing. So far, attempts have been made to explore this in interviews with patients, which is time-consuming and relies on the memories of the person concerned for a period of up to several weeks.

The epidemic situation affects nearly all nations, in addition it exerts a significant impact on the economy, and the major business entities managing significant data assets have shown solidarity in securing access to available data, while changing the strict data management practices. Of course, economic considerations may also come to the fore in connection with the processing of huge amounts of data that have not been available so far due to legal or economic circumstances. The data available in connection with the pandemic and the data generated in connection with the new procedures also deserve to be examined in connection with the tasks of national security and law enforcement.

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[1]    https://koronavirus.gov.hu/megelozes (downloaded 16 May 2020)

Data related to the movement and location of citizens in connection with the pandemic[2] examined and identified the following data sets to investigate the spread of the infection, including the identification of persons associated with the infected person.

Data from information systems can be used to draw conclusions about the spread of the virus:

1. Details of the device connected to the mobile phone device in close proximity.
2. Data collected by application providers regarding their geographical location (users collected by application providers are data processed by advertisements, social media, search engines or other online content providers).
3. Data collected by mobile devices pertaining to geographic locations in the systems of communications service providers.
4. Data processed in public video systems (cameras, drones, robots), possibly in combination with facial recognition systems.
5. Card usage data related to financial services.
6. Details of devices connected to the Internet.
7. Electricity consumption data.
8. Collection of Healthcare data from connected medical devices.
9. Data available on Healthcare care services.
10. Data from global observations by drones or satellites.

The above list typifies the services that may provide data for the government on the movement, location and health status of the citizens, to help assess the impact of the measures taken to curb the spread of the virus and may provide points of reference for further measures.

From the above data, in the present study, we examine the data of a device connected to a mobile phone device in close proximity.

With regard to the spread of Covid-19 disease it has been found that the virus spreads in air over a distance of 1.5-2 meters.[3] In order to effectively identify potentially exposed individuals with a novel approach, it was necessary to find or create a data source based on information systems where data on individuals at a distance of 2 meters are available and can be retrieved in a personal way.

Information technology, which already completely permeates our lives, gives us the opportunity to use it to slow down the spread of the disease, to prevent it, to carry out effective history research and contact tracing. Today, the penetration of mobile

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[2]   COMITÉ NATIONAL PILOTE D'ETHIQUE DU NUMERIQUE: Réflexions et points d'alerte sur les enjeux d'éthique du numérique en Situation de crise sanitaire Aiguë; Comité Consultatif National D'Éthique, 2020. https://www.ccne-ethique.fr/sites/default/files/cnpen-bulletin-telemedecine-2020-07-21.pdf (downloaded 16 May 2020)
[3]   http://www.euro.who.int/en/Healthcare-topics/Healthcare-emergencies/coronavirus-covid-19/novel-coronavirus-2019-ncov (downloaded 16 May 2020)

phones in the world with 5.8 billion subscriptions[4] is significant, so the use of mobile phone-related data is the most obvious option. In addition to the traditional GSM voice call, the mobile phone has many functions and communication options. Without any pretension of being exhaustive, these functions include WLAN, Bluetooth, NFC, satellite navigation (GPS, GLONASS, BEIDU). Data retrospectively found in mobile networks is inaccurate to identify connections within a distance of 2 meters, just like data retrievable from a WLAN network, however, the effective range of NFC technology is only 0.5-1 meters, so it is not appropriate, either. According to technology companies and research centers data worth being examined are linked to satellite positioning data and Bluetooth[5] and the use of artificial intelligence[6] is also being looked at.

Due to the fact that location data with an accuracy of 2-3 meters cannot be extracted from information systems in all cases, a special program suitable for the identification of these parameters is needed. The program is also collectively referred to as a contact tracing application.

Research on the prevention of the spread of epidemics has been carried out in several universities using information technology data, even before the appearance of COVID-19. Oxford University published in 2012[7] Fundamentals of a program running on a Bluetooth -based mobile phone as part of a project. The study determined that the solution based on Bluetooth technology is only effective if it is used by a high proportion of the population. Since the penetration of Bluetooth- enabled mobile phones was not yet large enough in 2012,[8] the application prepared in the study was not further developed.

First, solutions related to the satellite positioning technology came to the forefront, but the development of Bluetooth-based applications began simultaneously.

### *Contact tracing based on satellite positioning*

The contact tracing applications, which first became widespread, collected the mobile phone satellite positioning data with the time stamp, using a dedicated application. The application installation, the application identifier (AppID) was correlated with user data and telephone number on the server of the Healthcare Authority. The data collected by the application (GSP, timestamp, AppID) was uploaded to the Healthcare Authority server. In case a user proved to be infected with the Covid-19 virus, the Healthcare Authority flagged the AppID belonging to the

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7    FERRETTI et. al. op. cit.

8    https://www.bluetooth.com/wp-content/uploads/2018/04/2019-Bluetooth-Market-Update.pdf (downloaded 16 May 2020)

personal data of the infected person, created a change of status in the database. The position and timestamp data of the infected person's AppID were compared with all the data in the Database and if a match (place and time) was found, then the application sent a warning message to the application corresponding to the matching AppID, stating that the user shared the same location with an infected person. At the same time, the Healthcare Authority also receives notification of the matching identifiers concerned, and the persons concerned may be contacted by the Healthcare Authority for testing, and their movement may be restricted.

Organizations and authorities dealing with data protection complained that the government can have unrestricted access to data on the movement of citizens who downloaded the application.[9] The fact that the accuracy of the satellite based positioning is 3-10 meters indoors, while an accuracy of 1-3 meters can be achieved outdoors.

The contact tracing application based on satellite positioning is used, among others, by Cyprus, Bulgaria, Singapore, Israel, Norway, the Czech Republic, India, Iran, China, South Korea, after downloading the application.[10,11]

### *Bluetooth-based contact tracing*

Bluetooth technology is a data transfer protocol developed for close-range communication. Bluetooth allows low energy, two-way data communication over a short distance. Bluetooth is able to establish multiple connections at the same time, thus establishing and maintaining a connection with devices that are close to each other. Using this technology with the help of an appropriate application the users of devices who stayed near an infected person and may have been infected themselves may be narrowed down.

Two distinct approaches emerged during the development of the program, along the lines of centralized and decentralized data management and data storage. The two approaches are separated along the fault line of data protection, there is no difference in the technique of detecting nearby mobile devices.

In the centralized solution, the user's personal data are recorded when the application is installed. When installing the application, a unique AppID is generated. When the application is run, the AppID is transferred to the other device during the Bluetooth data connection. The "foreign AppID" received from the other device and the duration of the connection attached to its own AppID are forwarded by the device to the central server. The connected AppIDs are stored on the central server along with the duration of the connection. The user has no additional tasks. If the user is proven to be infected, the Healthcare Authority will take action. If one of the users is

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[9]   https://www.europarl.europa.eu/news/en/headlines/society/20200429STO78174/covid-19-tracing-apps-ensuring-privacy-and-data-protection (downloaded 16 May 2020)

[10]  Patrick HOWELL O'NEILL – Tate RYAN-MOSLEY – Bobbie JOHNSON: A flood of coronavirus apps are tracking us. Now it's time to keep track of them; MIT Technology Review, 2020 https://www.technologyreview.com/2020/05/07/1000961/launching-mittr-covid-tracing-tracker/ (downloaded 16 May 2020)

[11]  https://docs.google.com/spreadsheets/d/1ATalASO8KtZMx__zJREoOvFh0nmB-sAqJ1-CjVRSCOw/edit#gid=0 (downloaded 16 May 2020)

found to be infected, the database entries for the AppID are listed and the connected users are notified based on their AppID. Depending on the server privacy settings, the data is deleted, if their validity has expired, Covid-19 contact tracing requires retention of the data for two weeks.

In the decentralized solution, it is not necessary to store personal data, only a telephone number, to which the verification code is sent. During the installation of the application a unique application ID (AppID) is generated. The program generates a public key for the AppID. If another identical application is available nearby, this key will be exchanged during the Bluetooth data connection and the duration will be recorded at the end of the connection.[12] In case someone using the application is found to be infected, they themselves are required to update their status in the application, and as a result of this the data stored on the device are uploaded to the server following authorization. In addition to AppID, the public keys are uploaded to the server. At specified intervals, each device downloads the currently compiled database from the server with the public keys. The application determines whether its own public key can be found in the database, if so, it checks if the infected person's public key can be found to the database for that contact (to avoid false alarms). If all data sets match, a notification is displayed in the application. Based on the AppID the Healthcare authority will learn an infected person's telephone number for further measures to be taken.

In the case of a centralized solution, the Healthcare Authority can make a status update following a positive test, and thus ensure notification of the persons involved in the risk of infection, while the decentralized data storage solution the person infected himself/herself is capable of initiating the notification.

A decentralized hybrid solution is when the Healthcare Authority is able to decrypt AppID from the public keys. This makes it possible to facilitate the work of the authority, as the authority also has information on potentially vulnerable people and has the opportunity to contact them in order to take further action.

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[12] CHAN, Justin – FOSTER, Dean – GOLLAKOTA, Shyam – HORVITZ, Eric – JAEGER Joseph – KAKADE, Sham – KOHNO, Tadayoshi – LANGFORD John – LARSON, Jonathan – SHARMA, Puneet – SINGANAMALLA, Sudheesh – SUNSHINE, Jacob – TESSARO, Stefano: PACT: Privacy Sensitive Protocols and Mechanisms for Mobile Contact Tracing; Cornell University Downloaded: 24 May 2020, https://arxiv.org/pdf/2004.03544.pdf (downloaded 16 May 2020)

*Figure 1: Screen image of VIRUS RADAR application*[13]


**VIRUS RADAR is an application introduced in Hungary**

The VIRUS RADAR application was ordered by the Ministry of Innovation and Technology with the assistance of the Government IT Development Agency and operated on its infrastructure, which was developed by Nextsense Plc.

The VIRUS RADAR application introduced in Hungary provides the decentralized hybrid solution operating with the Bluetooth connection presented above. A VIRUS RADAR applications from Google and Apple app stores for free download, and install the Android and iOS software running on mobile telephones.

To use the VIRUS RADAR application, after installation, the mobile phone number is registered and then verified by sending an activation code in an SMS message. This procedure is used to authenticate the number, as the National Public Healthcare Center can contact the user later through this number, thus ruling out false positives.

After installation, the application works independently, without intervention.

When installing the VIRUS RADAR application, a unique application identifier (AppID) is generated. The program generates a public key for the AppID.

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[13]    Source: https://virusradar.hu/ (downloaded 16 May 2020)

If another identical application is available nearby (1), this key will be exchanged during the Bluetooth data connection (2) and the duration will be recorded at the end of the connection – Figure 2.
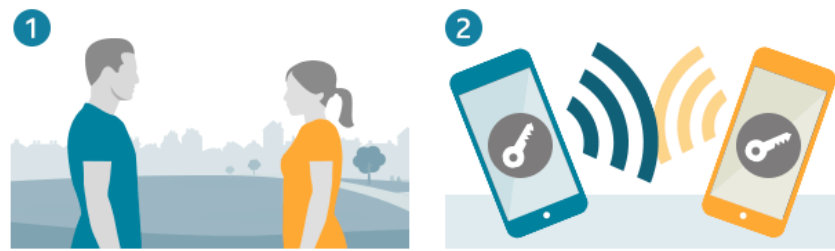


When A and B meet, their phones exchange a key code

*Figure 2: The application exchanges a private key over a Bluetooth connection*[14]

In case someone is found to be infected, it is the person himself/herself that has to make a status update in the VIRUS RADAR application pending authorization by the National Public Healthcare Center (3), as a result of which the database of public keys stored on the mobile device will be uploaded to the server (4). In addition to the AppID, the public keys are uploaded to the server – Figure 3.



When A becomes infected, he updates his status in the app and gives his consent to share his key with the database

*Figure 3: "A" is confirmed to be infected, which is indicated on the application, and the public keys stored on the device are uploaded to the server*[15]

At specified intervals, each VIRUS RADAR application downloads the currently compiled database from the server with the public keys (5). The application checks if its own public key can be found in the database, if so it checks if the infected person's public key can also be found in its database for that entry (to avoid a false

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[14] Source: https://www.bbc.com/news/technology-52353720 apple/google (downloaded 16 May 2020)
[15] Source: https://www.bbc.com/news/technology-52353720 apple/google (downloaded 16 May 2020)

alarm). If all data sets match, the VIRUS RADAR will display a notification (6) – Figure 4.



B's phone regularly downloads the database to check for matching codes. It alerts her that somebody she has been near has tested positive

*Figure 4: B's application regularly downloads the database uploaded by the infected (A) from the server and checks if it contains its own (B's) public key*[16]

Based on the AppIDs, the National Public Healthcare Center learns the phone numbers linked to the infected persons for further measures to be taken. In the case of the VIRUS RADAR application, unlike the commonly used decentralized solution, the user can report the infection in the application if the National Public Healthcare Center allows it for the AppID of the application stored on the server. This solution avoids false, accidental, or malicious infected status reporting.

The VIRUS RADAR, according to its system configuration, if the mobile phone detects another Virus Radar application for 20 minutes, it will save the other Virus Radar application's public key.

The figure shows how the system works in a large crowd.

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[16]   Source: https://www.bbc.com/news/technology-52353720 apple/google (downloaded 16 May 2020)

**Bluetooth contact tracing**

Monitoring app users' contacts through proximity
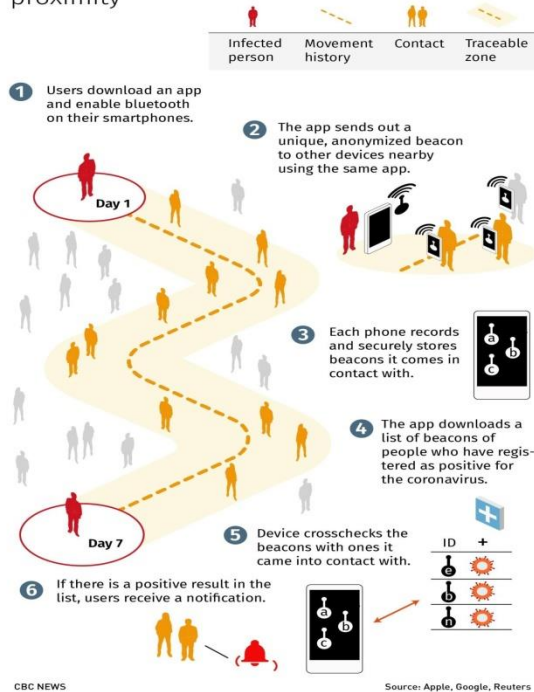
*Figure 5: Close contact identification model*[17]

The program measures and compares the relative Bluetooth signal level when calculating the 2-meter distance, which is not exact, as Bluetooth modems have different signal levels for different makes, but have a lower error rate than other applications.

Mobile phones with VIRUS RADAR installed on them and held by people standing more than 2 meters apart cannot connect with each other so their public keys will not be saved.

The application has also been introduced in Northern Macedonia with minor alterations.

### *International outlook*

In the case of applications introduced or being under implementation by the healthcare authorities of most nations,[18] contact tracking solutions based on the satellite positioning or Bluetooth connection detailed above will also be used.

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[17] Source: https://www.cbc.ca/news/technology/contact-tracing-apps-alberta-canada-1.5556933 apple/google (downloaded 16 May 2020)

[18] https://ec.europa.eu/Healthcare/sites/Healthcare/files/eHealthcare/docs/covid-19_apps_annex_en.pdf (downloaded 16 May 2020)

The contact tracing solutions based on satellite positioning are used in the following countries:

| Country | Application name | Technology used |
| --- | --- | --- |
| Bahrain | BeAware | Bluetooth, Location |
| Bulgaria | ViruSafe | Location |
| China | Chinese health code system | Location, Data mining |
| Cyprus | CovTracer | Location |
| Ghana | GH COVID-19 Tracker | Location |
| Iceland | Rakning C-19 | Location |
| India | Aarogya Setu | Location Bluetooth |
| Iran | Mask.ir | Location |
| Israel | HaMagen | Location |
| Norway | Smittestopp | Location Bluetooth |
| Poland | ProteGO | Bluetooth |
| Qatar | Ehteraz | Location Bluetooth |
| Turkey | Hayat Eve Sığar | Location Bluetooth |

The contact tracing applications based on satellite positioning are typical of those countries where concerns about data protection are not strong, disease prevention is more important to the citizens than concerns about the use of data for other purposes.

The contact tracing solution based on Bluetooth data connection with centralized data storage is used in the following countries:

| Country | Application name | Technology used |
| --- | --- | --- |
| Australia | COVIDSafe | Bluetooth |
| Czech Republic | eRouska | Bluetooth |
| France | StopCovid * | Bluetooth |
| India | Aarogya Setu | Bluetooth, Location |
| Mexico | CovidRadar | Bluetooth |
| Norway | Smittestopp | Bluetooth, Location |
| Singapore | Trace Together | Bluetooth, BlueTrace |
| Turkey | Hayat Eve Sığar | Bluetooth, Location |
| United Kingdom | NHS COVID-19 App * | Bluetooth |

The contact tracing solution based on Bluetooth data connection with decentralized data storage is used by the following countries:

| Country | Application name | Technology used |
|---|---|---|
| Austria | Stopp Corona | Bluetooth, Google / Apple |
| Bulgaria | ViruSafe | Location |
| Estonia | Estonia's App * | Bluetooth, DP-3T, Google / Apple |
| Finland | Ketju * | Bluetooth, DP-3T |
| Germany | Germany's App * | Bluetooth, Google / Apple |
| Ireland | HSE Covid-19 App * | Bluetooth, Google / Apple |
| Israel | HaMagen | Location |
| Italy | Immuni * | Bluetooth, Google / Apple |
| Malaysia | MyTrace | Bluetooth, Google / Apple |
| Hungary | VIRUS RADAR | Bluetooth |
| North-Macedonia | StopKorona | Bluetooth |
| Poland | ProteGO | Bluetooth |
| Switzerland | Swiss Contact Tracing App * | Bluetooth, DP-3T, Google / Apple |

The contact tracing solution based on a Bluetooth data connection with centralized and decentralized data storage is separated only by data protection principles, the principle of operation is the same.

It can be seen that some countries use both technologies to make the data more accurate.

Almost all states have used special legal instruments to curb the COVID-19 pandemic, which has never been seen before in a technology-based social system. Several states[19] used and attempted to use in connection with protection, in addition to data that can be recovered from mobile telephone networks, mobile satellite positioning and data derived from Bluetooth and data on financial, travel activities, on geographical location.

The Government of Hungary has declared a state of emergency throughout the territory of Hungary in order to eliminate the consequences of a human pandemic causing curb protect human epidemic causing massive disease, to protect the health and lives of Hungarian citizens.[20] To effectively manage the emergency, it has

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[19] LIN, Leesa – HOU, Zhiyuan: Combat COVID-19 with artificial intelligence and big data; Journal of Travel Medicine, Oxford Academic 2020.
https://academic.oup.com/jtm/article/27/5/taaa080/5841603 (downloaded 18 August 2020)

[20] Government Decree No. 40/2020. (III. 11.) on the declaration of a state of emergency

developed a novel application in line with the global trend, which enables the decentralized collection of data and provides an efficient contact tracing process. The Virus Radar application introduced by the Hungarian government gives the user the opportunity to notify persons potentially at risk of infection if their infection is proven, while the National Public Health Center also has access to the data in order to quickly take the necessary measures.

The data collected by the contact tracing applications can only support the activities of the national security and law enforcement agencies – in case of appropriate legal authorization – if the solution ensuring centralized data management is applied. In the case of centralized data storage, if the circle of contacted persons can be effectively identified. If the data belonging to the satellite positioning service are also available, then in addition to the fact and time of the connection, it is also possible to find out exactly where the meeting took place. In order to support the activities of the national security services, to detect and prevent an act of terrorism, the data on the exploration of our personal relations are of paramount importance. Data collected by applications that combine satellite positioning and Bluetooth-based data collection can provide the most accurate data ever known.

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ISTVÁN BANDI

## ON THE ACCESS TO SECRET SERVICE DOCUMENTS IN THE ARCHIVES OF THE COLLEGE FOR EXAMINING THE ARCHIVES OF THE SECURITATE IN BUCHAREST

*Abstract*

The Historical Archives of the State Security Services as a specialized repository of pre-1990 documents of the Hungarian state security services is much better known to the community of Hungarian historians and archivists, however, CNSAS in Roumania (Securitate Archives of Investigation National Council) archives are less known. The present study, in addition to looking at the history of the institute, gives a brief overview of its role in the lustration process, of the circumstances under which the documents were entered into the archives, of the processing of the archival materials deposited there. The significance of the Roumanian specialized archive is further increased by the large number of documents related to Hungary, the processing of which presents a serious challenge for the Hungarian researchers. Describing the basic conditions of research and some research avenues proves the fact that the CNSAS offers historians and archivists a wide range of opportunities for research.

*Keywords*: Roumania, CNSAS, lustration, transfer of documents, archival processing, file folder types, Hungarian aspects

The first legal framework that paved the bumpy road of exploring the past for the CNSAS was created amid extraordinary circumstances[1] in the wake of in a Bill submitted by Ticu Dumitrescu[2] and a political compromise of Roumanian political parties in Parliament.

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[1]  The case that later became famous as the incineration of documents at Berevoiesti, famous -i file firing as cases in which the 1990 Bucharest outskirts of the previous era state security documents (including references) and assertions made in 2018 by historian Marius Oprea, (IICCMER- Institute for the Investigation of Crimes of Communism) according to which the members of the new political elite coming into power in December 1989, notably Gelu Voican Voiculescu (First Deputy Prime Minister, 1989), transferred an extremely large number of files from the Securitate's Bucharest headquarters to the Victory Square Palace (Government seat 1989) then later to the Research Institute of the Revolution headed by Ion Iliescu. https://psnews.ro/acuzatie-bomba-gelu-voican-voiculescu-doseste-o-parte-a- archive-securitatii-bucuresti-in-pivnita-institului-revolutiei-exclusiv-214684/ (downloaded 19 December 2019) If these allegations prove to be true and the trial of the former president of the state Ion Iliescu, former deputy prime minister Gelu Voican Voiculescu and General Ion Rus (commander of the air force in 1989) ends up with the conviction of the defendants, a further significant amount of documents may be transferred leading to the archive of CNSAS (College for the Investigation of Securitate Documents) in Bucharest.

[2]  DUMITRESCU, Ticu Constantin (1928-2008) was a politician of the historic peasant party after World War II. He was arrested by the Securitate in 1949 and could not complete his legal studies. He was released in 1964. After 1989, he served as a Senator in the National Parliament for the Peasant Party (PNTCD) from 1992 to 2000 and served as chairman of the International Organization of Political Prisoners. Founding member of the CNSAS College he initiated from 2005 until his death.

Even the proposed legislation providing access to the archives of the Securitate generated extremely heated debates and suffered serious cutbacks, but the merits of it being passed in legislation are due to Senator Ticu Dumitrescu (Partidul Naţional Ţărănesc CRESTIA Democrat – PNŢCD, National Peasants' Party) who was a victim of the Communist dictatorship and submitted the Bill to Parliament as the president of the Association of Former Political Prisoners (Asociaţia Foştilor Deţinuţi Politici din România), as a concrete legislative move, a law which he would later be named after him. At this time, the only institutional model to be followed was the German BStU which was hallmarked by Joachim Gauck.[3] The legislative initiative, launched in the hope of responsible exploration, was adopted by the Roumanian Legislative Assembly in December 1999, after a number of formal and substantive changes, under the designation *"Access by a citizen to their own case file and the unveiling of the political police"*. The law seeking to serve purposes of lustration enabled the establishment in 2000 of the CNSAS (National Council for the Investigation of the Securitate Archives) in Bucharest[4], however, for many years the new institution did not have the infrastructure, staff, archives or headquarters needed to achieve the objectives set by law. In March 2000, a panel of 11 members of the ACNSAS main forum, the College, took the oath before the Roumanian Parliament. Act 187/1999 referred to the institution's competence to provide data, access, access, screening of public figures, and to process the archives of the political police for scientific purposes. The institution thus created is a wholly central budgetary body, subject to parliamentary oversight, appointed for a period of six years, chaired and supervised by an 11-member college (body) delegated by parliamentary parties.

### About CNSAS Archives

The Establishment of the National Council for the Investigation of the Securitate Archives (CNSAS) in 2000 did not automatically mean easy access to the files kept in the Securitate archives. In 2003, the socialist democratic government designated a deposit ((later a permanent CNSAS external storehouse) Roumanian Information Service SRI – Serviciul Roman de Informaţii, Roumanian Intelligence Service SIE – Serviciul de Informaţii Externe and the Military Archives nominated a deposit in the conurbation area of Bucharest, on the outskirts of Popesti – Leordenite settlement, SADM – Serviciul de Arhive şi Documentare Militară storage of documents submitted by the social Democratic government.

The scheduled work of the joint committees of CNSAS and trade unions began in order to secure as many classified documents as possible in the newly created institution. Its legacy in 2004-2005 was that the archives of the Roumanian Information Service (SRI[5]) and Foreign Affairs (SIE[6]) and military intelligence

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[3] GAUCK, Joachim (1940-) German Lutheran minister, theologian, politician. 2012-2017 President of the Federal Republic of Germany. In 1990 he was chairman of the Committee Investigating the Documents of the State Security (STASI), which was dissolved, and founder/head of the Federal Office of the Federal Security Office for the Management of National Security Services established in 1990 (legally since 1992).

[4] A Roumanian institution equivalent to the Hungarian Historical Archives of the State Security Services.

[5] Roumanian – Serviciul Român de Informaţii

[6] Official name of the Service – Serviciul de Informaţii Externe

(SADM[7], later SIA[8]) massively began to transfer files and microfilms. The Ministry of the Interior, on the other hand, did not budge. The explanation is simple, as there was no statutory requirement, it never defined or regulated the files that should be turned over to CNSAS.

The lack of initial regulation and professional experience led to the development of record-keeping procedures which prove(d) very costly to both the central budget and the citizen. The movement of archival materials (files) was not considered to be an optimal solution either from the point of view of registration or from the point of view of conservation or security. Given these aspects, perhaps it would have been better to arrange for the receipt, storage and scientific processing of the documents/files originally held at county level at local or regional level. Thus, similarly to the German and Polish institutional models, Roumanian citizens would not have to pay travel and accommodation costs, especially when the applicant is older, to travel hundreds of kilometers in order to assert their right of access.

The impact of the 2004 parliamentary elections became felt from 2005, with the Supreme Defense Council's (CSAŢ) of February 28, 2005, 13, and the 700 linear meters of files handed over by SRI over the previous five years within the short retention period, they handed over another 12,000 linear metres of files.[9] Emergency Government Ordnance No 149 of 10 November 2005 (OUG 149/2005) contained measures to ensure the continuity of the activities of the Institute.

In 2006, positive processes seemed to pick up speed. In February, Emergency Government Ordnance No 16 (OUG 16/2006) widened the scope of individuals to be lustrated and stipulated that all those who are in important positions shall, under criminal responsibility fill in a form in which they declare whether they collaborated with the secret police. If their own declarations do not correspond to reality, these persons can be held to criminal responsibility for their false declarations, the decree said. From March, the CNSAS came under new leadership, which included Ticu Dumitrescu. On December 16, State President Traian Băsescu[10] denounced communism in Parliament as an "illegal and criminal" system.[11]

In 2007, further transfers of documents took place, whereby the volume of the archives reached 20 000 linear meters, and as a result, the Board was able to meet its statutory obligations set forth in Act 187 in full. For the purposes of service of documents and lustration, the Inter-Institutional Committee (CNSAS-S Joint

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7    Serviciul Arhive şi Documentare Militare The term "documentare" is used to refer to the recording, classification and preservation of information, which is also used to describe files.
8    Serviciul Istoric al Armatei
9    See CNSAS Annual Report 2006. www.cnsas.ro/documente/rapoarte/Raport 2006.pdf (downloaded 20 January 2020)
10   Băsescu, Traian Upon completion of the Naval University in 1976 he served as a captain in the Roumanian commercial fleet until 1987. In 1991, the Transport Ministry for secretary of state. From 2000 to 2004 Mayor of Bucharest. From 2004 to 2014, President of Roumania.
11   The full report of the Committee of Presidents can be found here: https://www.wilsoncenter.org/sites/default/files/mediadocuments/article/RAPORT FINAL_CADCR.PDF (downloaded 20 January 2020)

Services) met 32 times a year. In practice, 17734 persons were lustrated, of which 4159 were ex officio and 13 575 were specifically requested. Finally, the College adopted 4,610 decisions. Among the decisions, it was stated in respect of 101 persons that they collaborated with the Securitate under the provisions of the law, while in 381 cases the active duty service relationship with the former political police was established. On the basis of applications from subject matter law investigators, the College decided in a further 341 cases that the persons concerned cooperated with the political police in accordance with legal requirements. There was an increase of 277% in the number of lustration cases when compared with figures a year earlier. It should also be stressed that the institution did not have an increase in staff, although it had a budget for a staff of 300, of which only 255 positions were filled.[12]

Although 2007 was a major year for screening, identification, research and service of documents, the legal measures taken in 2008 brought about a revolution in the life of the institution, as well as screening and recent research. The Roumanian Constitutional Court[13] by its Decision No 51 of 31 January 2008, declared unconstitutional Act 187/1999 establishing CNSAS, and Emergency Government Ordinance 16/2006 regulating the activities of the said institution. The liberal government of Călin Popescu-Tăriceanu,[14] by issuing two successive and mutually supplementary emergency ordinances (1/2008 and 24/2008), prevented complete disestablishment. With support from Marius Oprea,[15] Security Policy Advisor to the Prime Minister, Parliament adopted Law No 293/2008, at the end of the year (December) without any votes against, which still defines the legal framework for the work of the institution. This law, which remains in force today, provides that:

1.  The unveiling (blowing of cover), despite the high hopes this designation raises, simply means the identification of an alias (code/cover name), which can only be requested by the subject of surveillance (or their legal successor).

2.  The Administrative Court pronounces culpability for those who are to be screened ex officio and for those who are lustrated upon request.

3.  All those who surrendered their apartment for use to the political police[16] are also liable to accountability.

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[12]  According to CNSAS Annual Report 2007.
www.cnsas.ro/documente/rapoarte/Raport2007.pdf (downloaded 22 January 2020)

[13]  Voiculescu, Dan, Vice President of the Senate at that time, in his trial of being an agent, his lawyer, Sergiu Andon, who was also chairman of the legal committee of the lower house, requested to review the constitutionality of Act 187of 1999.

[14]  Tăriceanu-Popescu, Călin (1952) Engineer, professor. Since 1990, he has been active in the private sector and in politics. From 1990 he was present in the Roumanian Parliament as a Member and a Senator. From 2004 to 2008 he was the Prime Minister of Roumania.

[15]  Oprea, Marius (1964-) Historian, writer, poet. Expert on 20th century dictatorships, founding president of the Bucharest Institute for the Investigation of the Crimes of Communism.

[16]  Roumanian equivalent to safehouse (covert apartment) owner, lessee – "gazde case conspirative" in Roumanian – a person who consented to his apartment being used for purposes of secret meetings between handlers and agents of the state security police. It was not uncommon for state security officers to carry out "operational tasks" with their consent, even at their workplace. The technical equipment of such premises allowed for recruitment, secret meetings with network members, intimidation, compromise and other covert investigative operations.

4.  The College of the CNSAS can only screen pastors' "Securitate" pasts in the Secret Service Archives at the request of the church concerned, but any accredited person may conduct research.

In practice, the new legislation stipulates that a decision on the issue of personal involvement issued by the CNSAS College and relevant to the data subject must always be subject to judicial review and a determination as to whether or not the person involved in the proceeding did or did not cooperate with the state security services. The effectiveness of CNSAS and its governing body has been diminished by the enforcement procedure whereby the Board of the Archives (ACNSAS) responsible for preparing the lustration puts a case on the College table, which, following a majority vote, submits the matter to the Bucharest court administrative department. The procedure is free of charge, but CNSAS is required to attach certified copies of the file to each case.

The person concerned has the right to challenge the court's decision on his involvement. The court is required to publish its final decision in the Official Gazette.

As you can see, the lustration procedure is cumbersome and extremely lengthy. In line with new legal requirements, the CNSAS panel sent 292 cases to the Bucharest Administrative Court in 2008, of which, as it transpires from an activity for 2009 prepared in the first half of 2010 that 213 cases were still pending before the court, and 12 cases were nullified as a result. In 53 cases, cooperation was confirmed and in 11 cases the decision was rejected.[17]

**Receiving and processing of documents stored in the archives of CNSAS**

Returning to the increase and sorting of archive records, following the 2005-2007 handover dumping, the transfer "habits" of the national security technical services and other government agencies stabilized, reducing to about 200 running meters of document flow.[18] Although a kind of cyclicality can be found in the process of transferring and receiving documents, the incompleteness of this process continues to hamper lustration and the transparency of the processing of archive records, respectively.

An initial difficulty in sorting out the archives was that the previous archives did not provide electronic records. The fond and the register were drawn up by the archives' professional team in accordance with the arrangements for receiving the documents, which were still regulated by the Securitate's records and archiving rules in the 1970s.

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[17]  According to the 2009 CNSAS Parliamentary Report
http://www.cnsas.ro/documente/rapoarte/Raport%20CNSAS%202009%20NEW.pdf
(downloaded 21 January 2020)
[18]  This trend is supported by the CNSAS Annual Reports and by Laura Cornea, Director in 2017. March 2 interview was said in the information. (Interview owned).

To illustrate how easy it is to combine documents in the same fond, let's just give you an example.[19] Investigation files had a troubled history. Part of the investigation / operational files that are part of the investigation fond, are those that illuminate politically motivated convictions and the number of prisoners from 1945 and 1989 in Communist Roumania and although some say there were political convictions only until 1964, there is clear evidence that the politically motivated imprisonments lasted until January-February 1989, with the latest political trial taking place around March. The investigative fond files were distributed between several state institutions during this period (1945-89), some of which were held by the Roumanian Intelligence Service (SRI) in 2000, when the takeover of the archives began, and a significant part of the files was filed with the Ministry of Justice. Against this background, CNSAS was virtually forced to initiate cooperation with the Ministry of Justice, which, of course, had other duties to preserve the investigation file. It was a difficult issue to coordinate that in certain cases, where the applicant or researcher on a national basis had requested access to certain materials, they were placed in two different places. However, there have also been situations where, due to different rehabilitation procedures, the Ministry of Justice has also worked from the same investigation file.

The situation was further aggravated by the fact that the rehabilitation of former political prisoners began in 2000, so the Ministry of Justice began withholding documents confirming the rehabilitations of stakeholders or requesting them (including from the CNSAS), the return of which documents to the archives failed to take place.

In the course of rehabilitation, files of the former Securitate formed the starting point for the judges and the lawyers, which were partly held by the Ministry of Justice, while another part by the SRI. The CNSAS requested the service of documents on the basis of its legal obligation, but in practice there were two separate processes, one for archives and one for public administration. Finally, the investigative fond records were collected from three institutions – from the SRI, the Ministry of Justice and the Ministry of Public Affairs. Today, the CNSAS Archives maintains 25,000 running meters of paper documents in two locations in the Bucharest Central Archives (DAC-Direcția Arhiva Centrală) and the Popești-Leordeni Archives (DAPL-Direcția Arhiva Popești-Leordeni).

CNSAS is the repository and manager of the Securitate's archives, and therefore, neither under the Archives Act, could it reorganize or alter the structure of its archives, preserving them as it was handed over to the former archivists.

On the other hand, if these archives had been handed over in the 1990s – because, unlike its partner countries, Roumania follows the Polish and German model, namely the provincial, in our case the county-level archive model, with local administration and processing –, and does not perform this transfer, that is, centralization, perhaps it would have been possible to process the files more

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[19] SPIRIDON Raluca, Sursele istorice ale archive CNSAS, limitele documentelor din Fondul penal (1945-1968) (CNSAS archive historical sources, the investigation records fond limits of 1945 to 1968), in Caietele CNSAS Bucuresti, 2008/1, pp. 221-238. The record processing work taking place in the archives of the Roumanian CSNAS mostly specialty archival fond highlights the one-sidedness and less concerned with the methodology of processing.

efficiently and in larger quantities. There is virtually no end to the process of centralization, as the process of handing over documents has not yet been completed, as it is not possible to use the document without registration.

The files taken from the Roumanian Intelligence Service (SIE) indicate that they are in fact structured in the archives of counter-intelligence. That is, there is also an intelligence[20] (counter-intelligence) fond as well as a network and documentation fond. Criminal/investigative missing.

As regards the military counter-intelligence document material, it is worth mentioning that the archives staff have not yet reached the systemic processing of the fond, for the time being yet the vast majority of researchers and other interested parties focused on the other archival records, and paid less attention to this one.

Future processing and inventorying may also reveal interesting things for research here. As far as the current receipt of documents from the Ministry of Defence is concerned, there have been no archival receipts in recent years. In addition to paper storage, the archive should also mention the microfilm stock. In 2017, more than 600,000 microfilms were in the archives.[21] The microfilm and microfiche media would actually double the amount held in the archives on paper document carriers, i.e. if we were to print the data on paper, it would double the 27 000 a paper-based material and would exceed 50 000 linear meters in total.[22]

Notwithstanding the above, it would have been and still would be a major step forward to make available to researchers and those interested in subject matter the lists of already processed archival materials. The operation of the archives was seriously affected by the decreasing central budget support.

The material transferred to the CNSAS archives comes from several former repositories, mainly state security special services, but regularly from the Ministry of the Interior, the Ministry of Justice and the Military Courts. In the latter case I designated the Ministry of Defence (MApN) as a supplier of documents in the statistical tables below.

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[20] The Roumanian literature consistently continued internal use concept/domestic intelligence instead of counterintelligence. (An example is the SRI: formerly Direcția Informații Interne – Internal Intelligence Directorate)

[21] www.cnsas.ro/documente/rapoarte/Raport CNSAS 2017 (downloaded 21 January 2020)

[22] By comparison, the ÁBTL has 4,000 linear meters of material stored.

| Time of delivery | Transferring body | Volume transferred (volume) according to institutions | Total quantity transferred |
|---|---|---|---|
| 2001-2002 | SRI<br>SIE<br>MApN archive<br>Military Courts | 6761<br>163<br>-<br>96 | 7020 |
| 2003 | SRI<br>SIE<br>MApN archive<br>IM | 1397<br>4<br>-<br>44 | 1445 |
| 2004 | SRI<br>SIE<br>MApN archive<br>IM | 18 203<br>236<br>-<br>2136 | 20,575 |
| 2005 | SRI<br>SIE<br>MApN archive<br>IM | 1 098 789<br>341<br>-<br>3246 | 1 542 550 |
| 2006 | SRI<br>SIE<br>MApN archive<br>IM<br>Min. Public | 382 113<br>23 189<br>24-844<br>737<br>20 | |
| 2007 | SRI<br>SIE<br>MApN archive<br>IM<br>Min. Public (Prosecutor's Office) | 24-545<br>27<br>-<br>166 349<br>13 923 | 204,817 |
| 2008 | SRI<br>SIE<br>MApN archive<br>IM<br>MIRA (Home Office) | 139,709<br>12<br>-<br>-<br>83 | 139,804 |
| 2009 | SRI<br>SIE<br>MApN archive<br>IM<br>MAI (Passport & Cadre Dept.) | 362,247<br>22<br>-<br>-<br>1797 | 364,066 |
| 2010 | SRI<br>SIE<br>MApN archive<br>IM<br>MAI (Passport Dept.) | 192 439 files (on microfilm)<br>160 volumes<br>197 327 files and cards<br>-<br>- | 389,926 |

| 2011 | SRI | 5189 files | 7156 |
| | SIE | 50 | |
| | MApN archive | - | |
| | IM | - | |
| | MAI (Passport & Internal Counter Intelligence Dept.) | 1926 | |
| 2012 | SRI | 89 819 volumes | 90,969 |
| | SIE | 59 | |
| | MApN Archives (Military Court) | 529 | |
| | IM | - | |
| | MAI (Passport Dept.) | 562 | |
| 2013 | SRI | 240 956 file folders | 241,869 |
| | SIE | 384 | |
| | MApN archive | - | |
| | IM | - | |
| | MAI (Cadre Dept.) | 529 | |
| 2014 | SRI | 220,416 volumes | 221,256 |
| | SIE | 349 volumes | |
| | MApN archive | - | |
| | IM | - | |
| | MAI (Passport Dept.) | 491 | |
| 2015 | SRI | 17 304 record units d.+ card. | 17,834 |
| | SIE | 176 record units d.+ card. | |
| | MApN archive | - | |
| | IM | - | |
| | MAI (Passport Dept.) | 354 file folders | |
| 2016 | SRI | 279 683 file folders | 281 089 |
| | SIE | 88 record units | |
| | MApN archive | - | |
| | IM | - | |
| | MAI (Passport Dept.) | 1318 record units | |
| 2017 | SRI | 157 160 file folders | 157,362 |
| | SIE | 64 record units | |
| | MApN archive | - | |
| | IM | - | |
| | MAI (Passport Dept.) | 138 record units | |
| 2018 | SRI | 25 681 record units d.+ card. | |
| | SIE | 21 record units | |
| | MApN archive | - | |
| | IM | - | |
| | MAI (Passport p.) | 296 volumes | |

*Figure 1: Volume of documents handed over to CNSAS archives, broken down by year and by issuer*[23]

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[23] This table is based on the CNSAS Annual Parliamentary Report.
www.cnsas.ro/rapoarte.html (downloaded 21 January 2020)

The recording of material transferred to the CNSAS archives by media is not entirely consistent. The institution's annual report periodically uses the terms "file folder" or "volume" to describe materials retrieved from previous filers, and even the resolution of microfilmed or bagged material is not clear. That is why I used the concept of record unit for the sake of comparability.
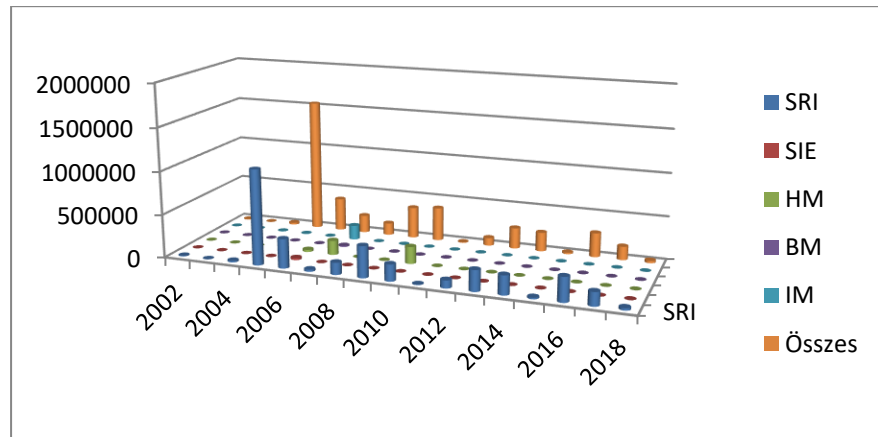


***Figure 2: Guarded units transferred to CNSAS archives, broken down from foundation to the present day***
*(Összes = Total; HM = DOD; BM = MOI; IM = DOJ)*

It can be clearly stated that the set-up around the administrative difficulties and the new record keeping and the alignment of the institution playing a part in lustration with the state apparatus took time for acceptance. The first major document transfer took place after the expiry of Iliescu's state president's mandate, since Băsescu, having been elected state president in 2004, exerted an influence on the Supreme Defense Council in 2005, and the presidential commission investigating the crimes of communism was also active at the same time. This alignment remained until 2009, when a procedure challenging the legality of the CNSAS concluded. In the second decade of the second millennium, mass compensation cases also placed an extremely heavy burden on archives, and this is also evident in the document reception activity. Indeed, no significant reception of documents took place in 2011 and 2012. The cyclical nature of the transfer of documents may be related to the extent to which the President of the State has influenced the record-keeping services through the Supreme Defense Council. This also explains the fact that, after a period of relatively small transfers, there has been a more intensive transfer, as indicated by the SRI statement during the 2019 presidential election, when it was announced that CNSAS would be given documents in excess of its storage capability in the near future, all at the request of President Johannis.

So, the SRI statement of 17 September 2019,[24] the counter-intelligence agency pledged[25] over 1,000 running meters of documents to be handed over in the near future

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24  https://www.agerpress.ro/social/2019/09/17/stirile-amiezii-bucuresti-17-septembrie--370753 (downloaded 22 January 2020)
25  The transmission of EU classified documents began in October and November

to the Archives under the supervision of the CNSAS Commission, and it is extremely important that SRI has handed over a filing system for Securitate county-level networks.[26]

At the moment it is not possible to know exactly how many network persons' registration materials, in addition to the 28092 paper-based cards may be included in the 828 rolls of microfilm transferred, and how many record units (file folders, volumes) are transferred on 12 716 rolls of microfilm, but it is clear that along with the recently transferred materials and the materials to be transferred in the near future, the archival materials are now approaching 30 000 linear meters.[27] Through their hard work, Roumanian archivists will surprise the public and historians with a number of unknown additions in the near future.

## Major file types stored in CNSAS

### Personal file folder (Dosar personal)

The PERSONAL DOCUMENT reflects the professional background of the officer/NCO (MI/M.A.I. – MOI employee). The file contains: personal data, professional further training; regular evaluations; promotions; downgrades; positions and powers within the structures of the Securitate.

### Case and facility file (Dosar obiectiv, Dosar problema)

The HIA's equivalent of the archival material – A materials and O file folders - the case files were opened on ethnic, or professional (writers, artists, musicians, etc.), religious communities, former members of political parties in the interwar period, institutions and organizations, social movements, industrial facilities in Roumania until 1989.

The monitoring (personal) file folder (Dosarul de urmarire informativa – DUI)[28] A collection of documents containing intelligence and material from individuals or groups of individuals from operational investigative, inspection/surveillance activities. A person may have been brought to Securitate's attention for the following reasons:
* membership of former historical parties, organizations/associations/ professional groups, religious denominations;
* the "boldness" of open expression of dissatisfaction with state and party leadership, the country's economic and cultural situation;
* manifestations of "nationalism-irredentism" in nature;
* propagation of news and rumors at home and abroad;

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[26] http://www.national.ro/news/cnsas.anunta-cate-documente-s-au-preluat-deja- de-la-sri-669386.html (downloaded 22 January 2020)

[27] CNSAS conference of 17 September 2019 on the documents received: www.cnsas.ro/documente/comunicare presa/2019/comunicat presa09/17/2019_1.pdf (downloaded 22 January 2020)

[28] The equivalent of the HASSS would be the ex-ante verification, operational file. The Roumanian and Hungarian type file folders do not correspond with each other completely.

* listening to foreign radio stations;
* authoring "hostile" writings;
* attempting to cross the border illegally or staying abroad illegally;
* correspondence and contacts with persons abroad.

### *Network file folder (Dosar Rețea)*[29]

The network file folder contains the documents compiled by the Securitate agencies for a person (agent, co-worker, owner of an apartment, support person, agent candidate) recruited by an agent. The originals of the material provided by the source (briefing reports) were archived in the supplementary or annexed file folder, and copies of them were usually used in the files of the persons to be briefed on.

### **Supplementary file holder v. folder (Mapa anexa)**[30]

### *Investigation and prison file folder*[31] *(Dosar Penal)*

The investigation file shall contain the conclusions of the suspicion, the arrest warrants, the interrogation records, the witness statement, the indictment, the judgment, the appeal and the sentence. According to the filing or file-sorting practice, prison files were also attached to the investigation files.

A prison file folder reflects the whole period of imprisonment and includes the following documents: command on the enforcement of the sentence, an extract from the judgment, the transfer cards, health cards, presence registration cards, notes on the implementation of administrative penalties (days of solitary confinement), the release order and the non-disclosure agreements related to the detention. These file folders were affixed to the above-mentioned examination or penalty files.

The above file types were provided by SRI and used by former counter-intelligence directorates until 1989. The types of file folders taken over by SIE from the current intelligence service that were earlier filed by the Intelligence Directorate of the Securitate in the fond of the CSNAS were archived uniformly as SIE fond materials and this practice further complicates academic exploration. Within the said SIE fond, at least 4 types of file folders can be clearly distinguished: file folder containing process, staffing material, file folder opened on a target /facility/ (institution, individual) files or documents for organization.

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[29] The HASSS equivalent is the B file.

[30] The HASSS equivalent would be the M file folder, however, the Roumanian Mapa anexa (contains only a few reports by the agent. The reports are sorted according to the linear or territorial principle and in the case of the agency's employment plan in the (Informativ dosar), that is, in the monitored person's file).

[31] Corresponds to the V (Investigation) file folders kept in the HASSS.

**The Hungarian aspects of the exploration and processing of Roumanian state security sources**

The above-mentioned 50,000 linear meters of archival material increases by 200 linear meters a year. Based on my seven years of file exploration experience[32] we know that approximately 10% of this archival file volume is related to Hungary.[33]

For this reason, exploration and collection of documents can only be carried out systematically and according to a specific theme, and taking into account the Roumanian archives methodology. At the same time, the digital collection of Hungarian documents can always be done according to the rules of historical and archival methodology.

Archives lists prepared by ACNSAS can help with Hungarian-related explorations. However, here too, the delaying effect of the continuous filing of documents prevails. For example, I would mention the experience of a methodological review in 2016. In the first half of 2016, the processing of an 8008-page Roumanian State Security Investigation Inquiry led to some thoughts.

Since its inception, the Roumanian counterpart archives has listed 8008 pages of investigation files, so it is expected that it will take years to complete the processing of nearly 2 million items received from Roumanian counterpart agencies. Based on the documentary material processed so far it can be stated that investigation cases were opened in the period 1920 to 1989 and that cases involving Hungarian speaking individuals are over-represented, that is, in slightly more than 9000 cases of the 66 000 records, Hungarians were the subjects of investigation.

In addition, the analysis of the investigation fond (inventar fond penal) also showed that the former, rooted in the 1920s, processing principle and orientation of the state security agencies show continuity during each social system, be it in the parliamentary kingdom, royal-, legionnaire or Antonescu type dictatorship, or later the Gheorghiu-Dej regime, then the Ceausescu regime. The discovery of this single but extremely important document type is evidence that one of the main tasks of the Roumanian secret services has always been to deal with the minority issue.

Based on previous exploratory work, it can be known that the facility files fond (fond documentar) allows us to get to know the level of Transylvania society especially post-1956 settlement from the village up to the county towns.

The exploration of other documentary records, such as the network fond (fond rețea), personal – (fond cadre) and facility /archive documents (fond documentar) help to understand the professional activities and methods of the Roumanian special services before 1989.

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[32] From 2014, a formal cooperation agreement governs the relationship between the HASSS and CNSAS.

[33] However, according to archives director Laura CORNEA, the Hungarian relevance of the documents kept by CNSAS exceeds more than 50%. The question is what is meant by the Hungarian relevance.

The research also has the potential to throw light on the co-operation and co-existence of Hungarian and Roumanian home affairs, more particularly in the field of state security, before and after the Second World War.

ACNSAS resources are essential for mapping out the collective and individual Roumanian communist violations committed against Hungarians in Roumania after 1944. Some acts after the Second World War were typical both by Gheorghe Gheorghiu – Dej internment camps and the prison system of the Ceausescu era.

Mention must be made here of the Hungarian victims of the internment camps set up from the autumn of 1944 autumn, the several waves of internment of Hungarians implemented under the sign of ideology, but truly based on the principle of collective guilt of a minority (Roumanian research institutes and research institutes in Roumania34, respectively, have the details of the victims at database level), the masses of ethnic Hungarians imprisoned in the internment camps of the Danube Delta and Danube Canal. Of particular note is the wave of repressions associated with the 1956 Hungarian Revolution, which significantly affected the Hungarian community in Roumania. The Ceauşescu regime's prison systems also allow for the identification of those who have been prosecuted in open or secret criminal proceedings, according to CNSAS sources. An independent research area is Hungarian emigration out of Roumania, which is closely linked to the fate of emigration in Hungary and to the mother country.

A number of other research avenues include the exploration and understanding of the activities of the Hungarian and Roumanian (and other third-country) secret services, both together and side by side.

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## *GEOPOLITICS*

ALI (SHEIKH) AHMED ABDI

## AFRICA'S IMPERFECT INTERSTELLAR REACTION TO THE COVID-19: QUIZZED CONTINENT'S HUMAN SECURITY

### *Abstract*

The emergence of this deadly, infectious, viral disease in Wuhan of Hubei, China, the coronavirus 2 (SARS-CoV-2), the world has quickly realized that the rapid spread of the virus worldwide has presented one of the most difficult challenges confronting our present world. Within the realm of four months, nearly five millions cases have been recorded, of which more than a quarter of a million have been fatal as of 13th May 2020. Numerous nations have taken extraordinary measures to stop the spread. From 13th April 2020, practically all nations showed a high-level of escalated alertness to halt the promptness and the transmission rates of the deadly coronavirus in their geographical spheres of control. However, despite this COVID-19 spared no one and has taken a heavy toll on every sphere of human life triggering a lot of direct and indirect public suffering, particularly in countries in the southern hemisphere. Thus, under this article, the author probes the current pandemic's origin, the level of its catastrophic course in both the short and long term. With hindsight of the ongoing conspiracy theories about the novel coronavirus, and the flip side of an understated response among African states, the author will closely study the socio-political, economy and the public health challenges African state likely to face at the height of the COVID-19 pandemic.

*Keywords***:** COVID-19, Politics, Economic, Socio-cultural, Health, Elections

> *"Knowing is not enough; we must apply.*
> *Willing is not enough; we must do"*
> (Johann Wolfgang von Goethe)

### Introduction

If one deadly event ever dominated global health discourse in 2020, it is this unprecedented and unescapable COVID-19 pandemic, which profoundly tested the reaction capacity of every state and nation in our present ecosphere. Towards the end of the last quarter of 2019, a strange but infectious coronavirus pandemic showed up in a very deadly disposition in a world already upset by burgeoning economic firebrands regrettably escorted by competitively polarized political despondency. The mysterious rise of the potentially lethal novel coronavirus initially surfaced in December 2019 (although there has been and still is some debate regarding where the first case zero appeared and exactly when). From one of the Chinese principal urban cities named Wuhan and has since promptly dispersed across the four geographical compass directions of the globe. COVID-19 emerged with the similar apprehensions

like that of the SARS pandemic, which itself was 'novel' at one time, and in about two decades prior hit the People's Republic of China in similar fashion.[1]

China, being one of the most crowded countries of the world with population of 1.3 billion[2] individuals are often said to have a share of the pie in the process of intentionally spreading the pandemic. As China's ties with the rest of the world become progressively solid, ailments emanating from infectious diseases in China no longer remain an individual or household issue. Thus, throughout the last three decades of Chinese politico-economic reform that brought China into the global economic limelight, there have been tumultuous tests of talents such as environmental, demographic, social and political tense positioning that presented challenges to the Chinese people themselves. As I compose this article, there are right now, 39 notifiable and ordinarily infectious diseases found in China. Truth be told, these are to a great extent classified into three groups named in alphabetical progressive order as; A, B or C as indicated by their pandemic levels fit for incurring potential pandemics to the entire human populace. Just so, in 2008 alone, the assessable pace of uncontrollably infectious diseases that surfaced among the general Chinese populace came to more than 3000 cases for each one million peoples.[3]

Astonishingly, the COVID-19 outbreak precipitated 'victim blaming' that was inclined towards racial, geographical and xenophobic attitudes found in some quarters, rather than the external forces that influenced the pandemic, thus resulting in blaming the Chinese for the outbreaks of the COVID-19 epidemic and its related consequences. After all, the rise of the deadly coronavirus has really alarmed people all over the globe, grasped the news media, unleashed socio-political and economic ruin, evoked huge public health and wellbeing actions in numerous nations on the planet and more so in Africa. Like the Ebola epidemic in West Africa, the COVID-19 scourge has truly sparked fears in the continent, to a limited extent, owing to the ineptness of the African health amenities and institutions and the awful contiguous budgetary crisis, mainly related to most of Africa's Ministries of Health, thereby limiting their capacity to handle epidemics. Its impact is now felt keenly on social lifestyles largely attributed to the travel and tourism industry of each and every country in the world in a less than ninety days. Furthermore, the COVID-19 is potentially shaping rapidly the global, pitiable, financial, political, and **psychological effects** or mental impacts, compounded by, as yet, the current lack of cure in Africa and in the entire world.

Notwithstanding its severe effects on human health and wellbeing in a profoundly interconnected and consistently reliant world, whose pace of communication gigs turned to be unimaginable. At the same time, the great accomplishments in the techno-innovation of science, a consequential gift in the gique era of globalization, has truly helped to accelerate the quick spread of the latest

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[1]  Diseases, Division of Viral. 2020. cdc.gov/coronavirus/2019. Coronavirus Disease 2019 (COVID-19); https://www.cdc.gov/coronavirus/2019-ncov/faq.html (downloaded 15 May 2020)
[2]  China, National Bureau of Statistics of 2010: Yearbook of Chinese Health. Beijing: National Bureau of Statistics of China; 2010. ISBN: 978-7-81136-536-8
[3]  Lei ZHANG – David P. WILSON: Trends in Notifiable Infectious Diseases in China: Implications for Surveillance and Population Health Policy; Sydney University of New South Wales, 2012. Vol. 7. DOI: 10.1371/journal.pone.0031076.

information across international and all-concerned neoliberal transnational institutions, so as to join efforts, in order to restrain and preclude the prevalence of the COVID-19 pandemic. Inordinately large numbers of us, especially of those in the Abrahamic confidence, have heard constantly and throughout history the accounts of terminal pandemics that occasionally killed off the whole or portion of a country, tribe, nations and nationalities. Like any other part of the world, Africa had been exposed to numerous pandemics, of which history could only cover a few out of hundreds of deadly diseases that in the past rampaged the continent. This may have been owing to unawareness or lack of interest on the part of the first Africa historiographers accompanying the foreign explorers. Among these historians, there is an exception in the case of Howard Phillips, who has given us an influentially hard-hitting and heart-breaking study that exposes some of the key pandemics witnessed over the last several centuries in the continent's history. Such selective pandemics include; bubonic plague, smallpox, Spanish flu or Spanish Influenza, poliomyelitis and lastly HIV/AIDS, which is still raging in the region.[4]

Although impacts of the COVID-19 range from the demographic to the political, social, economic, spiritual, psychological and cultural spheres, yet each of these spates occurred at crucial moments in the continent's history. Consequently, in this article I present a heuristic depiction of the historical backdrop of sicknesses and pandemics in Africa, to find out whether the current COVID-19 pandemic is without a doubt a turbulent trial of the African continent's capacity or is a surprisingly beneficial turn of events to extend periods of rulership for the sitting regimes and political leaders in Africa.

In the human diseases kingdom, human Coronaviruses already existed, such as those usually causing the common cold or mild upper-respiratory tract illnesses. In order to differentiate the level and the scourge it has created, WHO announced an official name for the currently new virus disease as 'severe acute respiratory syndrome coronavirus 2' (SARS-CoV-2) that causes COVID-19, which was formerly known as the 2019 novel coronavirus. The sickness brought about by SARS-CoV-2 was as of late named COVID-19 by the WHO, the new abbreviation from "coronavirus ailment 2019." The name was chosen in order to abstain from deriding the infection's sources regarding populations, geology, or creature affiliations.[5]

Coronaviruses derive their name from the crown-like spears on its surface, with such covert imagery; the coronaviruses have developed to contaminate individuals' health globally and causes extreme sickness and massive deaths. COVID-19 is twice as severe as those beforehand. Human coronaviruses were first identified in the mid-1960s, of which seven of them infected people, these were; 229E, NL63, OC43, and HKU1. They are types of coronaviruses that infect animals, which can develop into advance stages so as to also infect human beings and turn into another human coronavirus. These three ongoing instances includes; 2019-nCoV, SARS-CoV, and MERS-CoV. COVID-19 was first recognized in the midst of a flare-up of respiratory

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4    PHILLIPS, Howard: Plague, Pox and Pandemics: A Jacana Pocket History of Epidemics in South Africa; Johannesburg, Jacana Media, 2012. B0868SV1HR

5    Organisation, World Health: WHO Director-General's remarks at the media briefing on 2019-nCoV on 11 February 2020; https://www.who.int/dg/speeches/detail/who-director-general-s-remarks-at-the-media-briefing-on-2019-ncov-on-11-february-2020 (downloaded 18 May 2020)

ailment cases in Wuhan City, Hubei Region, China. On 10 January 2020, Chinese health officials reported 41 cases of pneumonia due to a novel coronavirus (COVID-19), including seven patients with severe symptoms.[6]

## COVID-19 In Africa

### *The novel coronavirus' current condition*

As the new coronavirus continues its destructive spread all over the globe, nations in Africa resort pre-emptive preventive measures to kick the novel coronavirus sickness out of the continent, as a result there was/is demonstrations indicating a solid degree of readiness across the African nations captivating into radical actions to counter the spread and contain infections from expanding further in to the region. The puzzling ascent of the conceivably deadly novel coronavirus that at first surfaced in December 2019 from one of the Chinese urban commercial towns named Wuhan has since quickly scattered over the four topographical compass orders of the globe. African continent that lies in all four hemispheres of the earth was the last to report the new coronavirus reach, as a result, Algeria become the first country in the continent to report the acknowledgement of pandemic arrival on 25 February 2020. This dangerous scourge presently named COVID-19 pandemic which already stirred up the whole world since December 2019, it has now moved to Africa, seriously maybe to incur its last decent amount of harm before it is face removed from the globe lists of pandemics. From that point onwards, Africa recorded highly elevated cases count and, with in excess of 2,000 fresh cases announced every day in the preceding two weeks. As of yesterday on 20th May 2020, the novel coronavirus disease 2019 (COVID-19) yielded new death cases of 32,990 globally. While, a total of 4,622,001 COVID-19 cases and 311,916 (CFR: 7%) related deaths have been reported worldwide. Worldwide, a total of 215 countries and terrains have recounted COVID-19 contagion cases. In Africa, according to the data sourced from World Health Organization and African Union Member States, there are a total of 88,172 COVID-19 cases and 2,834 (CFR: 3%) deaths have been reported in 54 African countries. This is about 2% of all cases reported globally. Since the last brief (12 May 2020), 21,799 new COVID-19 cases have been reported, which is a 32% increase in new cases reported compared to what was reported in the previous week (05 to 12 May 2020). The proportion of new COVID-19 cases reported by region is as follows: Southern region 46% (10,055 cases), Western region 24% (5,189), Northern region 23% (5,084), Central region 12% (2,717) and Eastern region 11% (2,433). Six countries account for 66% of the new COVID-19 cases reported since the last brief. When population is taken into consideration, Djibouti (153), Sao Tome and Principe (107), Cabo Verde (59), Gabon (64) and Guinea Bissau (52) are reporting the most cumulative COVID-19 cases per 100,000 population within the continent. Five countries are reporting case fatality rates comparable to or higher than the global case fatality rate of 7%. Out of these, the case fatality rates for countries with 100 cases or more are: Chad (10%), Liberia (10%), and Algeria (8%).[7] From 13 to 19 May 2020,

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[6] U.S. Department of Health & Human Services: National Center for Immunization and Respiratory Diseases (NCIRD), Division of Viral Diseases; https://www.cdc.gov/coronavirus/types.html (downloaded 17 May 2020)

[7] ACDC, Africa Centres for Disease Control and Prevention. 2020. Outbreak Brief #18: Coronavirus Disease 2019 (COVID-19) Pandemic; Addis Ababa: Africa CDC, 2020.

339 new deaths (25% increase) were reported from 27 countries: South Africa (106), Algeria (46), Nigeria (34), Chad (16), Cameroon (15), Kenya (14), Mali (13), Sierra Leone (13), Senegal (11), Democratic Republic of the Congo (10), Ghana (9), Niger (8), Côte d'Ivoire (7), Congo (4), Gabon (4), South Sudan (4), Guinea-Bissau (3), Liberia (3), Mauritania (3), Sao Tome and Principe (3), Madagascar (2), Angola (1), Burkina Faso (1), Cabo Verde (1), Equatorial Guinea (1) and Togo (1). As of 19 May 2020, a cumulative total of 64,388 COVID-19 cases, including 64,091 confirmed and 297 probable cases have been reported across the 47 countries in the region. A total of 1,827 deaths have been reported, giving an overall case fatality ratio (CFR) of 2.8%. The current status in the region represents only 1.4% of confirmed COVID-19 cases and 0.6% of deaths reported worldwide. In the same reporting period, of the 47 countries, 11 have registered a cumulative total of more than 1000 confirmed COVID19 cases: South Africa (17,200), Algeria (7,377), Nigeria (6,401), Ghana (6,096), Cameroon (3,529), Guinea (2,863), Senegal (2,617), Côte d'Ivoire (2,153), Democratic Republic of the Congo (1,731), Gabon (1,502) and Guinea-Bissau (1,038). Two more countries, Gabon and Guinea-Bissau are the newest to cross the 1,000-case mark. Together, these 11 most-affected countries account for 82% of all reported cases in the region.[8].

### Africa's Reclusive Inclination In Fighting Against COVID-19
*Economic impact*

The COVID-19 episode has already negatively affected human life and caught the attention of the major monetary institutions all over the World following the control measures to slow the spread of the COVID-19 infection by lessening universal travel and disturbing worldwide trade interconnectedness, among others. Additionally, the tighter fringe controls imposed on manufactured goods that sometimes cause delays on the part of the service industries have further disrupted the firmly interconnected world business arrangements. Generally, the respective countries official declaration of isolationism has so far interfered with the free progression of individuals and merchandise, as preparatory precautionary practices, by customers and firms and confinements enforced by governments across the globe have greatly decreased travel and tourism industry, hence substantively decreased governments' income. For example, the Ethiopian government's five months emergency imposition is probably going to slow down the country's already frail food security situation, consequently driving a huge number of family units into abject poverty. As a result of widespread trade disruptions, lower agricultural production and fewer food imports are soon to be expected. According to the World Bank's recent Africa's Pulse report, COVID-19 is probably going to push Sub-Saharan Africa into its first economic depression in quite a while, that is 25 years, with development conceivably falling as low as negative 5.1% come 2020, with 90 percent of individuals working in casual occupations.[9]

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[8]    WHO: Situation reports on COVID-19 outbreak; WHO AFRO Region. Brazzaville: WHO Regional office For Africa, 2020.

[9]    BANK, World: Assessing the economic impact of COVID-19 and policy responses in Sub-Saharan Africa; Washington DC, 2020. Africa's Pulse, 2020. Doi: 10.1596/978-1-4648-1568-3.

In excess of 46 African nations had almost embraced similarly seven comparable lockdown measures, for example: school terminations, working environment terminations, wiping out of open occasions, terminations of public mobility, public information campaigns, restrictions on domestic and internal movement, and restrictions on international travel. The result absolutely prompts exceptional food deficiencies as about 66% of African nations are net shippers of basic staple foodstuff. In this way, the worldwide health disasters will include onto the existing food security pressures in Africa. In that, towards the end of 2019 is one commendable period that set apart by extreme beetle attacks especially in East Africa. By and large, there are assessed 11.4 million individuals who need quick food support, fundamentally in West Africa and the Sahel area, this circumstance is probably going to exacerbate, predominantly because of the effect of the pandemic. As per Organization for Economic Cooperation and Development (OECD) report by June-August 2020, 17 million individuals are as yet anticipated to be in a basic food security circumstance or even be exposed to more awful situation, including the 1.2 million already in a challenging emergency circumstance. Generally, the relationship between the health and security emergencies could spill in excess of 50 million individuals the presently under the tension of food insecurity situation.[10]

In this manner, above the health concerns, the danger of an economic blast to Sub-Saharan Africa as a result of the COVID-19 pandemic is likely to be high, thus, resulting altogether an unaffordable rise of household cost expenses. Africa's better late than never economic eccentricity, which incidentally awarded the continent with a tax buoyancy of less than 1, with yield records and incomes growing much faster than the developed world's usual tax elasticity is bearing the brunt of the COVID-19 pandemic. Almost all of the African governments shut their borders, dropped flights and forced severe entry-exists restriction policies as prerequisites to contain the spread of the novel coronavirus. All the 54 nations in the continent Ministry of Health's COVID-19 records is on an indecent into footing heading into continental health cliff as everyday new cases, new deaths with negligible cases of recovery continue to showcase as the day rises. While Africa implements a "***you close-your border, and I will close mine***" policy in response to COVID-19, nations in the continent will likewise be confronted by a decrease in their disease cases. Accordingly, African nations' financial capacity to respond to the COVID-19 pandemic emergency is acutely diminished and intensely weakened.[11]

COVID-19 has caused an economic crisis thereby perplexing efforts to deliver the essential services to the most affected sections of the population in Ethiopia. Households that are already socio-economically exposed to susceptibility are at high risk of contracting the virus. In any case, the specific susceptibilities of rustic Ethiopian towns and the vulnerabilities repressing the reactions of its medical services infrastructure are probably going to prompt extensively on the rising effects of the novel coronavirus pandemic Owing to the budgetary constraints, like many parts of Africa, the Ethiopian health system is largely more vulnerable, with poorer proportions of medical clinic beds, ICUs and health experts compared to its rural and

[10] OECD: COVID-19 and Africa: Socio-economic implications and policy responses; http://www.oecd.org/coronavirus/policy-responses/covid-19-and-africa-socio-economic-implications-and-policy-responses-96e1b282/ (downloaded 20 May 2020)
[11] Africa, Economic Commission for 2020. COVID-19 in Africa: Protecting Lives and Economies; Addis Ababa: ECA Printing and Publishing Unit, 2020. ISO 14001:2015.

urban populace. Ethiopia has declared a state of emergency following the pronouncement of delaying the long-awaited pivotal political elections that had been scheduled in August 2020.

The predisposition to take such risky measures is expected to seriously affect Ethiopia's once promising economic growth, and likely to cause at least one million job losses at a time when around two million young Ethiopians annually enter the labour market and the urban unemployment rate is just about 20 per cent.[12] The economy of many African countries is, more often than not, threatened by either the bias or rigidity of their policies to deal with the deadly coronavirus. Also, the inflexibility of the already sanctioned budget lines or, in most cases, the unavailability of unrestricted budget reserves complicated the modality to provide resources to handle the pandemic at the same time as enhancing economic growth, as well as ensuring that safety nets reach timely to the poorer, daily labourers and other workers at least the first ninety days of the lockdown, without necessarily demanding humanitarian assistance from day one of the pandemic. Since Sept 9th 2019 Ethiopia, under the new government reform has shared a new home grown economic policy with the world, which is intended to overcome the country's foreign exchange challenges. Perhaps this initiative would make Ethiopia go for additional debt accumulation and further request periodic support from all neo-liberal donor institutions.

On 24th March 2020 Prime Minister of Ethiopia Mr. Abiy Ahmed discharged an official message lamenting that, the continent's current economies are defenceless to a point of becoming highly vulnerable against externalities obliging African states to incur unavoidable cost of fixing effects as a default against disinclined third party. On top of that COVID-19 has brought already dented economies into high risk territory in the unlikely event of no timely forthcoming support, be it advance loans, multilateral support or extending leveraged loans from the donor community, Africa will be wrecked soon. Leveraged loans are more costly to the borrower and normally carry a higher risk of default, a fact that made most African states bad debtors. During this time of the COVID-19 pandemic, a test of both human capacity and financial affordability is on Africa's economic table as high obligation for additional loans troubles further just as high overhauling costs are.[13] To add onto that, as I write this article, I practically witness large number of families same as many other African citizens, refugees and other internally displaced families, mainly inhabiting Horn of Africa region whose livelihood survival formerly depended on diaspora money remittance are now been affected seriously by the global lockdown caused by COVID-19 pandemic.

### Politics And The Pandora Of Pandemics

As the world's economies and healthcare schemes tussle to cope with COVID-19, in this article, I will resoundingly share pertinent comprehensions on how the

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[12]  ICG: Managing the Politics of Ethiopia's COVID-19 Crisis; Brussels International Crisis Group, 2020.

[13]  STROBEL, Alisa: Ethiopia highlights challenges for African countries in coping with COVID-19; https://ihsmarkit.com/research-analysis/ethiopia-highlights-challenges-african-countries-coping-COVID19.html (downloaded 18 May 2020)

coronavirus pandemic is radically shaping the political agendas across the African world. As we see the African countries being challenged alike by the coronavirus pandemic, however, their potential response in terms of health, economy and political spheres are as diverse as the generality of her geography and cultures. Considering the similarity of history lessons, we read in the Greek folk tale teachings of the Greek's first human lady, the incredible Pandora, who's an apparent misfortune eventually brought forth a good optimism. Pandora happened to acquire Zeus' blessing pot, and on account of her interest in the content of the container she, was simultaneously advised against all endeavours to open it. In defiance of the heavenly advice, the mortal Pandora opened the container and out flew all shades of malice, torments, pandemics, and hardships. Much to her dismay, only one beneficial thing was left at the bottom of the container—humankind's only 'hope'. Through this myth, I draw an analogy with Ethiopia's current constitutional crisis that threatens to undermine PM Mr. Abiy's rulership prospect as the coronavirus pandemic unfolds: maybe the COVID-19 pandemic could introduce the Pandora's only hope to PM Mr. Abiy, as was established in Zeus' blessing pot, so as to expand his rulership prospect, which is now unavoidably being tested.

Being Africa's second most populous country, Ethiopia experienced an ethno-revolution from 2016 until early 2018, resulting the formidable change of leadership that finally brought Mr. Abiy Ahmed Ali from the Oromo, the single biggest ethnic nation of the country and the first ever non-Abyssinian as the Prime Minister and the regime head in the hierarchical history of Ethiopia political leadership. Since then, Ethiopia has dominated the curiosity and spotlights of both the academic and policy analysts of Horn of Africa's studies, whose area of focus is largely to determine the staging point, as well as the pace in which the 2019 Nobel Peace Prize laureate's transitional government is performing using pertinent indicators. For example, how stable are Ethiopia's ethno-cultural relations, the acceptability of the current politico-economic reforms among Ethiopians and the managerial capacity to handle the bending constitutional crisis at the height of COVID-19 pandemic. Following the announcement of Ethiopia's election board in late March 2020 on the impossibility to organise the national polls on time, which were due to be held in August 2020 owing to the current pandemic. In other words the delay of the country's national political elections implies that the new PM has a political chance to implement all of the wide-ranging political and economic reforms, of which some of them are already underway and others are seemingly on downward slope. Ideally the problem emanates from this point, that Ethiopia's constitution does not explain how the delay ought to be dealt with; a circumstance which has fuelled worries that Abiy's administration face authenticity issues before too long.

On the first week of May, Ethiopia's house of representatives in parliament's lower house officially requested that the upper house should give as permitted by the 1995 constitution a "sacred understanding" or a constitutional interpretation that could offer an exit from the current constitutional stalemate. In any case, that move has drawn complaints and resistance from opposition politicians, who stated that the move would leave them without a voice in the process as parliament is dominated by the ruling party.[14] For the most part, the ascent of the COVID-19 scourge is a serious

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[14] AFP 2020. Ethiopia's Abiy warns of opposition power grab amid pandemic; dailymail.co.uk, 07 May 2020. https://www.dailymail.co.uk/wires/afp/article-

matter for all nations on the planet and all the more so for countries in the global south. Without a doubt it has brought to the fore a level of flimsiness to the greater part of Africa's political foundations. In specific nations such as Ethiopia, where political elections are expected in around five and a half years, the COVID-19 pandemic has deferred the nation's national political polls to an uncertain period, who knows, it could be two, three, four or even five years after. Nations in Africa that had intended to hold their national polls this year or ahead of schedule one year from now end up in a precarious circumstance because of the pandemic. While few African states who took choices to postpone or amend political elections period will undoubtedly be politicized, as certain heads of states may likely exploit in their favour the novel coronavirus pandemic by extending their office occupancy past the predetermined election time. Meanwhile other liberal establishments, private international organizations and businesses affected by the COVID-19 pandemic began laying off fixed staff, as well as, those of everyday workers, sending others on unpaid leave and various associations have gone into liquidation to boost overall revenues.

As of May 9, confirmed coronavirus cases are 58.918 with recoveries numbering 20.337, while the loss of life on the continent remained at 2.172.[15] Fatalities of prominent figures as a result of the COVID-19 pandemic in Africa including the previous leader of the Republic of the Congo Mr. Jacques Joachim Yhombi-Opango and Somalia's former PM Nur Hassan Hussein. Over two months after Egypt turned into the first nation in Africa to confirm a coronavirus case; the flare-up arrived in almost every country on the African continent, inhabited by nearly 1.2 billion individuals. Remember, so far of Africa's 54 nations, Lesotho is the only one that has not reported even one incidence of the infection.[16] Thus, the COVID-19 pandemic has surely raised the more fundamental political question of whether the delay of national polls should be primarily a 'priority public choice' or a state choice.

### COVID-19: Is it a blessing in disguise for African leader's continuity?

#### *Bulwarking personal portfolio*

Is the coronavirus pandemic ostensibly 'bad luck' that eventually has good results for some African governments?

The COVID-19 has generally in Africa and more specific to Ethiopia brought to the fore a conspicuous predicament that delivers messages of uncertainty and political crisis in the democratic space of the world. In the months since this virus surfaced in Ethiopia's population, there has been a clear shift in Ethiopia's media coverage with all attention leading to COVID-19 to the extent that stories, which would ordinarily attract the ethno-conscious and politically delicate minds and hearts of the present-

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8296261/Ethiopias-Abiy-warns-opposition-power-grab-amid-pandemic.html (downloaded 09 May 2020)

[15] CDC, Africa: Latest updates on the COVID-19 crisis from Africa; CDC. africacdc.org/covid-19/. https://africacdc.org/covid-19/ (downloaded 15. May 2020)

[16] WARD, Rogan: Tracking Africa's coronavirus cases; https://www.aljazeera.com/news/2020/04/tracking-africa-coronavirus-cases-200401081427251.html (downloaded 18 May 2020)

day Ethiopians like the pivotal national elections have since been given very little attention and are passing unnoticed.

Starting at 18th May, Ethiopia reports 352 affirmed COVID-19 cases in contrast to the 145 reported on 5th May. All together the aggregate number of individuals recuperated has now reached at 116, while the size of those died has expanded to five. As the novel coronavirus impact continuous, the general philanthropic circumstance in Ethiopia keeps disturbing records because of the coincidently connected impacts of numerous crises ranging from socio-cultural, political and economy. According to UNOCHA Ethiopia reported that in May, some 470,000 persons have been affected by floods.[17]

Thus, the unfortunate arrival of COVID-19 has clearly revealed the unstable state of Ethiopia's political systems, and in worst case scenarios resulting in the government's decision to postponed elections owing to the COVID-19 pandemic. Decisions to delay formal democratic processed owing to the coronavirus emergency occur around the globe. With regards to COVID-19 pandemic, 47 nations of the world have chosen to defer the decisions to conduct national elections, while at least 14 nations have chosen to keep the polls as planned in spite of the sanitary emergency restrictions alerts from the World Health Organization. Like other countries in the world, including the USA, African governments should genuinely gauge the exchange between maintaining citizens' health and allowing them to uphold their democratic rights at the height of this deadly disease. Before the end of 2020, Africa is projected to undertake as many as 16 national elections, including presidential and general elections in countries such as Cote d'Ivoire, Ethiopia, Seychelles, Guinea, Tanzania, Burkina Faso, Central African Republic, Niger, Ghana, and possibly Somalia.[18] This, however, could mean that the COVID-19 pandemic has presented an open door opportunity for African head of states to fortify their grasp on power, misusing the 2020 global scourge to asphyxiate elections related public campaigns and defer the period for casting the national ballot. The height of the Ebola plague that raged across West Africa in 2014 coincided with Liberia's critical election year, whose previously devastating civil war had already put the country on a tenuous democratic path, and was without a doubt one that was steeply imperilled by general public health wellbeing's emergency. Despite such vulnerability, which materialised in two rounds of deferments of the national election date, the Liberian President Ellen Johnson Sirleaf promptly spoke with the rest of the nation's ideological groups of her daring choice to go ahead with national polls with the expectation to ensure universal suffrage or vote based rights at a time when the weighty state power is being moved into the hands of the executive arm of the government through the activity of incredible crisis measures. Indeed, such choice was pivotal to guarantee the progression of government and to keep Liberia's delicate political environment in harmony. Without political elections in the country, the provisions of a large portion

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[17] OCHA: Ethiopia National Emergency Coordination Center for COVID-19 response https://reports.unocha.org/en/country/southern-eastern-africa/card/6pjgSOnoiI/ and ETHIOPIA: COVID-19 Humanitarian Impact Situation Update No. 5. Addis Ababa: United Nations Office for the Coordination of Humanitarian Affairs, 2020. https://reliefweb.int/sites/reliefweb.int/files/resources/ethiopia_covid-19_humanitarian_impact_sitrep_14.pdf (downloaded 18 May 2020)

[18] DEVERMONT, Judd: Pandemic at the Polls; https://www.csis.org/analysis/pandemic-polls. (downloaded 15 May 2020)

of the parliament representatives in the Liberian governing body would have of course lapsed without replacements, setting off a constitutional crisis,[19] as we see presently in Ethiopia. Mali followed a similar way and chose to go ahead with the parliamentary election on 29 March, despite civil society asking for the possibility to delay the country's political elections. Mali had just delayed the national polls for a second time, because of security concerns. It is true that holding national elections in the hour of a global pandemic will not be simple; however it ought not to be seen as inconceivable without considering sensible estimates that could secure both citizen's health, wellbeing and their democratic rights. Countries that realise that national poll are not doable for the time being must give careful thought to measures that guarantee the coherence of administration, assurance of establishments and basic privileges of people. Consequently, in case of potential deferrals, at that point it ought to be agreed based on a sound evaluation of hazards and risks, while involving actors across the political divide and based on general public health evidence.[20] Thus, elections must be always be well-looked-after even in times of predicament, as they present civic trust in state institutions and hold public officials accountable for their deeds.

### Social Distancing And Psychosocial Pain

#### Paralysed African's Palpable Relation

It is by now an open reality that the economic and health effects of the destructive and quickly spreading (COVID-19) pandemic have been given noteworthy consideration. However, numerous health precautionary steps have been recommended by the World Health Organisation (WHO) and other general health specialists, in order to decrease the infection of the novel coronavirus from individual to-individual and at last, contain the entirety of the infection. The practice of absolute disconnection, social isolation and extraordinary changes in the daily lifestyle of Africans has turned into an unwelcomed innovation. Consequently, in an attempt to implement severely consistent social distancing measures to cut-off the spread of the COVID-19 infection, numerous governments around the world and more so in Africa, have been introducing policies of enforced lock-downs, social distancing, evening curfews on its residents unsettling Africans' communal sense of interdependence and belonging. Professional estimates undertaken by ECA indicate that a one-month full lock-down across Africa would cost the region about 2.5 percent of its yearly Gross Domestic Product, equal to about $65.7 billion every month. This is independent from and notwithstanding the more extensive outer effect of COVID-19 on Africa of lower investment flow, lesser costs on goods and as well as prices of all other article of trade in the continent. A full lockdown is assumed to involve the continuation of only essential services such as; food services and grocery shops, health and security services, with the substantial decrease of other economic activities. By the same token, private consumption, investment, labour supply and demand declined (Africa, 2020). Africans are now set up for what might be a plague of clinical depression resulting the

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[19] BANBURY, Anthony: Elections and COVID-19 – what we learned from Ebola; 08 April 2020. https://www.devex.com/news/opinion-elections-and-covid-19-what-we-learned-from-ebola-96903. (downloaded 15 April 2020)

[20] Ibid.

practise of social distancing, which continuously disrupting African communal norms in light of COVID-19.

The strict observance of social distancing has affected African's sense of being togetherness and spiritual congregations. In any case, the culture of extended family lifestyle and the culture of inclusive-togetherness has been the heritage of Africans norms, not only that, but often occupies at the centre of their governments, thus the need to come up with culturally pertinent ideas to move past the burden of legitimating social restriction and social distancing may work for a limited period, but not as a cultural solution. Instead concentrate on appropriate psychological education capable of providing alternative means to overcome possible social depressions at the height of COVID-19 pandemics.

## COVID-19 Conspiracy Theorists: World's Infodemic Alibi

> *"When fiction fallacies fill up in the social cosmos, science discipline divorces further deliberations for solidarity"*[21]
> Ali [Sheikh]

Following the flare-up of a respiratory illness that brought about by another novel coronavirus in Wuhan, China in December 2019, interest-groups started to spread bogus bits of gossip on Facebook and other internet-based social media moguls regarding about the puzzling novel coronavirus that causes COVID-19 disease. While some even propose, mistakenly, that the infection was made in a lab and an immunization designed for it exists. There is no vaccine yet available for the new 2019 coronavirus, thus, no patent identified with the new infection, either. Indeed, there is no immunization yet accessible for the novel coronavirus, which nowadays goes unwieldy with its real moniker as 2019 novel coronavirus, or 2019-nCoV.[22] WHO confirms that all accessible proof proposes the novel coronavirus began in animal creatures in China before the end of last year and was not controlled or delivered in a research centres. In any case, there is one situation available that claims the infection was man-made and was connected to a Chinese bio-warfare programme, yet that thought has been broadly excused and dismissed by specialists and pundits as a paranoid idea. Another situation keeps up that the infection while being kept in the lab in a distinctive state has coincidentally got away because of poorly managed wellbeing and safety protocols. While conspiracy theories about a possible leak at the Wuhan Institute of Virology have coursed to a great extent among some of the right-wing bloggers, others of conservative bloggers, some moderate media intellectuals and professional peddles on China, yet they have not offered any proof supporting

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[21]   Quote from the author of this article, Ali [Sheikh] Ahmed Abdi
[22]   McDonald, Jessica: Social Media Posts Spread Bogus Coronavirus Conspiracy Theory; https://www.factcheck.org/2020/01/social-media-posts-spread-bogus-coronavirus-conspiracy-theory/ (downloaded 18 May 2020)

that situation.[23] However, pervasive obfuscation or misinformation about the true image of the COVID-19 pandemic has as of now seemingly mislead the comprehension of the greater part of Africa's rustic masses, as majority of Africa states were gotten between the trouble of what should be done to slow the spread of COVID-19, and what its citizens should do to earn daily livelihood sustenance.

This comes by way of spreading uncensored, unfounded negative information on social media that dismisses the fatal virus disease as a mere West vs East conspiracy theory and is confusing the public with self-created sources often with ambiguous language that exposes the continent's difficult position to manage the pandemic. Thus, hindering chances to institute timely, but context-based innovations that would have emerged as a solution to cure and curtain the spread and stability COVID-19, especially in the Horn of Africa, as well as the countries torn apart by fortified conflict e.g. Somalia and Mali.

Recently, the UN Secretary-General António Guterres depicts the effect of the coronavirus as the most trying period the world ever faced as millions of the world population remained frightened, and looking for clear exhortation on how best to secure themselves and about those of their families and ones they care. António Manuel de Oliveira Guterres, the current occupant of the UN Secretary-General seat has in a worrisome tone warned against:

> *"Harmful health advice and snake-oil solutions are proliferating", "Falsehoods are filling the airwaves. Wild conspiracy theories are infecting the Internet. Hatred is going viral, stigmatizing and vilifying people and groups."[24]*

Such mystified critical misinformation has kindled a wanton blowout of unauthenticated speculations, creating widespread mixed feelings and reckless briefs about the coronavirus's potentiality to come to Africa on the one hand and inescapable action of deliberately arousing public fear on the other. African states partly are to blame for late intervention, owing to tied-up processes of interpreting existing laws or [and] establishing new policies to deal with the novel coronavirus pandemic. As a result, conspiracy theorist, far-right extremists, and as well as other antitheists quarters hijacked public conception about the deadly virus, thus, making late efforts to come up with findings carrying scientific facts about the contagious virus and its modes of spread are seemingly challenged by the African uncensored social media platforms. The rise of the coronavirus disease was met with uncontrollable fear about the cause and size of the infection in various social media platforms. Fringe conspiracy theorists created explanations that were virtually accepted over and over those from the conventional authorities. Among these was one widely blown-out bogus hypothesis that claimed the infection was one of the West's incognito bioweapons in a war against the rising China, where its spread was allegedly connected to a Canadian citizen of

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[23] David JACKSON – Kim HJELMGAAD: Trump says US investigating whether coronavirus spread after China lab mishap but cites no evidence; https://www.usatoday.com/story/news/world/2020/04/18/trump-us-investigating-whether-coronavirus-spread-china-lab/5158551002/. (downloaded 20 April 2020)

[24] ADELSON, Lisa: Hatred going viral in 'dangerous epidemic of misinformation' during COVID-19 pandemic; un.org. 14 April 2020.
https://news.un.org/en/story/2020/04/1061682 (downloaded 22 April 2020)

Chinese origin sent to spread coronavirus in the midst of Chines Wuhan city while working as a covert spy agent.[25]

Similar thinking reached senior government authorities, prominent politicians and mogul media outlets in most of the Northern hemisphere— the half of Earth and the country well above the equator. However, this does not mean that it deserves right to paint all northern hemisphere countries (and also some in the south, e.g. New Zealand) with the same brush, in that countries like Iceland, Finland, Germany, New Zealand leadership have been exemplary and have all done their best to foil the conspiracy theorists by taking strong action early on. Therefore, in some cases not only senior government officials or politicians fall prey to some of the widespread fringe theories related to the COVID-19 but also celebrities endowed with stunning stagecraft, the likes of M.I.A. and Mr. Woody Harrelson, by profession a singer and an actor respectively become victims of the much perpetuated ruse of the global elites using 5G (next generation of wireless technology) to spread the novel coronavirus, thereby establishing unfounded claims that sows a supposed link between 5G and Covid-19.[26]

As the world becomes divided on the growing conspiracy theories revolving around the COVID-19, spiritualization of the pandemic in Africa is seriously taking unhidden face, hence becoming more overt and obvious talk in public social media. Africa is not out of the danger of sinking into a further pronounced but a spiritualized fringe belief any more than anywhere in the world. In some parts of Africa, leaders took a religious approach in their endeavours to confront the novel coronavirus pandemic.

For instance, in Ghana [The Right Honourable] President Nana Akufo-Addo called for a national Prayer Breakfast meeting for Christian pastors. In Tanzania, President John Magufuli obstinately disallowed opportunities to announce publically rigorous procedures to avert the spread of the COVID-19 pandemic, considering that the individual's spiritual nourishment through prayers is a more viable action to slow the pandemic.[27] Considering that the virus is nothing other than an act of demon, President John Magufuli viewpoint did not pass without reaction, recently Magufuli meet with the wrath of World Health Organization for his uninspiring rejoinder to the pandemic by merely describing him as uncooperative in the fight against the pandemic. Many observers show concern about President John Magufuli's most recent assault on the nation's lab experts, arguing that the act will additionally hamper endeavours to battle COVID-19 on the off chance that he has not gained control.[28] Even though, the novel coronavirus pandemic [is] was difficult to contain, so too is the deception encompassing its nature and related information

[25]  SARDARIZADEH, Shayan– ROBINSON, Olga: Coronavirus: US and China trade conspiracy theories; https://www.bbc.com/news/world-52224331 (downloaded 18 May 2020)
[26]  KAUR, Harmeet: The conspiracy linking 5G to coronavirus just will not die; https://edition.cnn.com/2020/04/08/tech/5g-coronavirus-conspiracy-theory-trnd/index.html (downloaded 10 April 2020)
[27]  ASAMOAH-GYADU, J. Kwabena: Dealing with a Spiritual Virus: Whither the Prophetic? 13 April 2020. https://religiousmatters.nl/dealing-with-a-spiritual-virus-whither-the-prophetic/ (downloaded 18 May 2020)
[28]  MUGABI, Isaac: Magufuli's COVID-19 apathy is a recipe for disaster; https://p.dw.com/p/3bl19. (downloaded 14 May 2020)

**Recommendation**

As we see significant universal news outlets concentrating on featuring the endeavours of countries in the northern hemisphere to set up and maintain pertinent mechanisms to battle the new pandemic, African head of states, political leaders, academics and medical professionals cooperate to come up with innovative and context-based solutions to handle COVID-19 pandemics. African media channels should approach the current pandemic with integrity, and stop featuring topics largely beseeching emergency/relief aid from different quarters such as; nations in the North, corporate and individual philanthropists to extend a helping hand to aid Africa in the battle against the infection COVID-19 pandemic. African states should instead focus on negotiations to waive export bans and restrictions so as to keeping trade flowing and mainly of emergency medical supplies and staple foods during this period of the pandemic. Make an approach to global financial institutions and related foundations to performance and rapidly to give a ban on premium and advance loans reimbursements to African private sectors. While simultaneously proposing to development financial institution and other mega investors to broaden some portion of their $5 trillion financial stimulus bundle sanction for the G-20 nations. This will help Africa to continue and construct flexible financial support to African private sector institutions. Finally, African states must be carefully watch out particularly during the emergency period as there are possibilities of high risk of funds impropriety, massive corruption, embezzlement of emergency funds, and lack of transparency due to the urgency, unpredictability and unaccountability of funds flow during the pandemic.

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BERK CAN KOZAN

# NUCLEAR WEAPONS AS A MEANS OF DETERRENCE

*Abstract*

The monstrous invention of the century has been Nuclear Weapons. It might be said that nuclear weapons that ended the Second World War with the unlimited fear, created a successful balance and deterrence environment by ensuring that the noteworthy conflicts of the Cold War period ended before had become another great war. During the Cold War, the negotiations were about the control and on the limitation of nuclear weapons which led states to reduce the number of nuclear warheads. However, since the dissolution of the Soviet Union, the issue of weapons of mass destruction has not taken place in countries' policies. The general conviction was that states do not face direct threats from nuclear weapons at their borders. The threat of nuclear weapons seemed passé, and discussions often focused on the risk of proliferation and the prospects of a world free of nuclear weapons. But over the past few years, this situation has changed considerably. Nowadays, both major and regional powers are modernising their nuclear forces and starting to locate them at the centre of their strategies. Therefore, the concept of deterrence and the possibility of use of nuclear weapons, seems, come back.

*Keywords***:** Nuclear Deterrence, Nuclear Weapons, Cold-War, Post-Cold-War, Nuclear Proliferation

## I.    Introduction

"Third Reich" is commonly believed to be the first country having the intention to build an atomic bomb. The President of United States of America, Franklin D. Roosevelt, upon learning about this project from a letter written by a German scientist in exile, Albert Einstein, decides to act as soon as possible and proposes to the United Kingdom to produce such a weapon in a joint venture. As a result of these efforts, four different successful technologies were invented by Western researchers. The Americans finally realised the first bomb in 1945 and, after the capitulation of the Germans, used the "Little Boy" and the "Fat Man" to destroy the Japanese cities of Hiroshima and Nagasaki to force the empire to quit and "winning a worldwide war".[1] 1945 marked a pivotal point in nuclear weapon use, as well as state behaviour towards nuclear explosive devices. Soon after the end of World War II, in 1949, the emerging Communist superpower of the Soviet Union also acquired a nuclear weapon. So did China in 1964. After these dates, the danger of a global nuclear war became evident; the prevention of it one of the top priorities for both the Western and Eastern diplomatic missions. In 1968, the nuclear Non-Proliferation Treaty was signed by five countries, namely the United States, the United Kingdom, France, the Soviet Union and China but was never joined by other nations that detained the same power

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[1]    DAALDER , I. – LODAL, J.: The Logic of Zero: Toward a World Without Nuclear Weapons; Foreign Affairs, 2008/6. p. 80.

including Israel, India, Pakistan. Global nuclear controls were rejected by Israel, India and Pakistan, so it was easy for them to behave as they were able.[2]

In this article, the author would aim to point out that, with all the nuclear proliferation deals being progressively removed by multiple governments, the usage of nuclear arms has been more popular ever after the collapse of the Soviet Union, perhaps more so than during the Cold War. The central hypothesis behind this assessment is that though military powers possess a wide range of weapons of mass destruction, the atomic bomb remains the most hazardous and effective tool to deter others. This study's aims would aim to explore nuclear security policies, negotiations, and the re-emergence of nuclear deterrence. The article is analytical research based on discourse, comparative and analytical content focusing on Nuclear Deterrence. This paper analyses existing data and secondary literature by using various sources and point of view. Relevant book chapters, journal articles and internet sources, as well as the findings from author's empirical research, have been widely used. The primary objective of the paper has been formulated in the frame of the following question: How likely is global nuclear disarmament?

## II.    Nuclear Weapon Strategies During the Cold War

As two atomic bombs were dropped on two Japanese cities and incredible damage was caused to both human life and the environment and nothing was the same after the USA dropped two nuclear bombs on two Japanese cities in 1945, marking the start of the nuclear age.[3] The emerging nuclear superpowers soon understood after World War II that these weapons of mass destruction are basically not for effective use but to discourage other countries from the use of them. As Daaldel and Lodal point out *"They grew up to deter a massive Soviet army that threatened to invade and dominate all of Europe"*[4] In fact, the nuclear strategies to be observed in the bipolar world order is the non-use of these bombs.[5]

There was a short period of time after the sad incidents of Hiroshima and Nagasaki when the United States of America could think that they would have a long-lasting monopoly of the nuclear weapon; however, the Soviet Union proved to be successful enough in their nuclear research and development program and realised their atomic bomb in 1949. A short moment before this discovery, the Americans had to face a major dilemma whether or not to use this new means to force their own will on the Soviets during the long months of the Berlin Blockade between June, 1948 and May, 1949 when the Communists tried to cut West Berlin under American, British and French control off from the outside world to prevent the Western nations from introducing their new currency into the provinces held by the Soviets. The United States had the comparative advantage of possessing a nuclear weapon. Finally, the Western allies opted for an airlift system to provide inhabitants with food and medication but also decided to install nuclear ammunition in Western Europe to

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2    Ibid p. 87.
3    O'NEIL, A.: Nuclear Weapons and Non-proliferation: Is Restraint Sustainable? Security Challenges, 2009/4. p. 42.
4    DAALDER – LODAL op. cit. p. 80.
5    KISS, . P.: The Role of Nuclear Weapons in NATO's Early Cold War Strategies (1949–1957); AARMS, 2015/1. p. 107.

dissuade the Russians of further similar moves.[6] There was also another attempt by both the Americans and the Soviets to contain the use of nuclear technology in the frame of the newly formed United Nations Organisation. Unfortunately, these efforts to promote peaceful uses and restrict the construction of nuclear weapons failed in 1946. This case also showed to the outside world that the U.N. could not deal with the issue of the future proliferation of nuclear weapons and the key actors would become the individual national governments.[7]

*"The 1950s was, arguably, the most unstable decade of the nuclear age."*[8] Nevertheless, military experts in the 1950s were convinced that neither the Americans nor the Russians have the intention of fighting a full scale global nuclear war; rather, they considered nuclear weaponry an integral part of a broader tactic and strategic sets of means. Furthermore, the Russians argued that they had less nuclear weapons than the United States and that they are forced to develop new capacities because of their counterparts producing an ever-growing number of atomic bombs. The Soviets always tried to picture themselves as victims of the proliferation and underlined their wish to avoid a nuclear war. Contrary to the sentences often used by the Kremlin, the Soviets added their new nuclear assets to their offensive operational weaponry. This is also reflected by the new Soviet military doctrine proposed in the late 1950s which included the use of nuclear bombs to target the less populated industrial hinterlands of the Western nations in order to decrease their production capabilities.[9] Soviet self-confidence was also supported by developments in the field of technology on both sides. First, the Americans were able to build hydrogen bombs "using nuclear fission to ignite thermonuclear fuel". Initial tests took place in 1952 and the first bomb was realised two years later. The Soviets produced a similar device in 1955.[10]

Soviet politicians formulated more open threats after they could considerably increase their nuclear capabilities in the early 1960s. After 1962, they did not even deny the option of using these weapons to eliminate the enemy and to facilitate the disorganisation of another country. This new Soviet strategy was even more likely to be applied as the Communists discovered ways of manoeuvring nuclear weapons.[11]

Originally, the Americans, under the Truman administration, in 1948, planned a more active use for nuclear weapons as it was prescribed by the Policy on Atomic Warfare, a document prepared by the National Security Council. First, the United States had to realise that the nuclear air offensive could not fully destroy the Soviet potentials and even 70 critical attacks on Soviet cities and installations would not force the Soviets to give up a war.[12] Later, a shift in the Soviet approach provoked a change among NATO member states. As the European allies almost fully destroyed by World War II were incapable of contributing considerably to the arms race in the 1950s, they decided to obtain a technological superiority over the Soviets. This made the Western

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6    Ibid. p. 108.
7    HOLLOWAY, D.: Nuclear weapons and the escalation of the Cold War, 1945–1962; In: M. P. LEFFLER – O. A. WESTAD (eds.): The Cambridge History of the Cold War; Cambridge University Press, Cambridge, 2010. p. 379.
8    O'NEIL op. cit. p. 43.
9    KISS op. cit. p. 111.
10   HOLLOWAY op. cit. p. 383.
11   KISS op. cit. pp. 111-112.
12   HOLLOWAY op. cit. p. 378.

strategy be based on two key concepts that distinguish this approach from that of the Russians: the NATO members focused on defence instead of promoting aggressive offensive aims, while at the same time, their doctrine was concentrating on deterrence and not on actual use.[13] The direct result of the offensive Soviet nuclear strategy was the near-disaster Cuban Missile Crisis. In 1959, a Communist guerrilla took over the tropical island that lay just a few kilometres off the coast of Florida and turned to the Soviet Union to arm them in order to make them capable of defending themselves against an eventual American attack. Between 1959 and 1962, large amounts of weapons and ammunition, including land-to-air missiles, were transported by sea to Cuba. On September 8 1962, the first nuclear ballistic missiles were also smuggled into Cuba, which was a secret to the American government until more than a month later. The deployment of the warheads was made clear due to the fact that a Soviet general, Pliyev, inspected the missiles and became known outside Cuba. U.S. President Kennedy was planning to invade Cuba, whereas Soviet Secretary Krushchev wanted to hand over tactical and strategic nuclear weapons to the Cuban leader Castro and the Cuban people. Luckily, both heads of State were wise enough not to do so and a nuclear war was avoided.[14]

### III.  Agreements on Nuclear Proliferation

The Cuban Missile Crisis showed the international community that their understanding of the threat of global nuclear war has to be reconsidered. In the mid-1960s, considerable discussions took place on a worldwide level to prevent the reproduction of such a dangerous situation. Mutually assured destruction was the basis of a reachable agreement between the USA and Russia following the discomforting close-call of the 1962 Cuban Missile Crisis.[15] This active conflict-solving mechanism, as a resulted of the Non-Proliferation Treaty (NPT), which was signed by 43 countries in 1968. The treaty is still in vigour and as of 2005, one can say that 189 countries have joined this agreement, though its efficiency and compliance is still very much debated.[16] Though the treaty itself is called a non-proliferation agreement, it did not prevent governments from increasing the number of nuclear weapons because, in fact, the treaty itself recognises the inalienable right of nations to the peaceful use of nuclear energy that can easily lead to its less peaceful uses. Enriched uranium and plutonium may be produced by a country due to weaknesses of the NPT; it must, however, declare such activities and demonstrate that they are under a civilian nuclear program.[17]

Guarantees codified in the treaty do not always work. Despite prescribing the inspection of possible covert nuclear reactors, the International Atomic Energy Agency (IAEA) fails most of the time in visiting and condemning those sites. They do not continuously supervise these nuclear power plants and therefore, in periods of

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[13]  Kiss op. cit.  p. 114.
[14]  Allison, G.:The Cuban Missile Crisis; In: S. Smith – A. Hadfield – T. Dunne (eds.): Foreign Policy: Theories, Actors, Cases; Oxford University Press, 2016. pp. 257-259.
[15]  O'Neil op. cit. p. 44.
[16]  Tertrais, B.: Saving the NPT: Past and Future Non-Proliferation Bargains; The Nonproliferation Policy Education Center, Paris, 2005. p. 1)
[17]  Daalder – Lodal op. cit. p. 87.

time when they are not present, illicit activities might go on.[18] Another weak point of the NPT is that it does not contain effective sanctions and does not foresee any way to force signatories to act according to the spirit and intention of the document. Furthermore, the NPT lets these countries leave the treaty without any difficulty. That was the case for North Korea in 2003.[19] North Korea quickly started testing nuclear devices shortly after leaving the treaty in 2003.[20] Pyongyang argued at the time of the incident that they have the right and the duty of preserving the security and dignity of the nation and that their complete pulling out does not mean that they would produce nuclear weapons.[21] In the 1970s, the different countries, especially the Soviet Union, were feeling that the NPT is not implemented in the way it was intended and underlined the importance of stricter regulations referring to a stronger implication of the Security Council of the United Nations. In 1975, at the Review Conference of the NPT, the Russians and their allies proposed that even the General Assembly of the international organisation has to deal with the issue.[22] Some other governments were doubting the efficiency of the Security Council. The representative of Nigeria - fearing that the apartheid regime of South Africa would acquire nuclear weapons - stated at a public discussion in 1968 that this body cannot prevent any aggression as the countries having nuclear weapons do not consider the U.N. a universal guarantee for stopping the proliferation of nuclear weapons.[23]

The NPT was not the only agreement that dealt with nuclear weapons. The so-called Vladivostok Agreement, signed in November, 1974, also produced another set of treaties known as the Strategic Arms Limitation Talks or SALT I and SALT II.[24] The basic idea behind the SALT agreements, as imagined by the Soviets, is the establishment of equal forces on both the American and Russian sides. In the mid-1970s, the Russians had to realise that their doctrine was offensive and deterrence might be outdated and the United States might attain its goal of having a technological superiority over the Communists. The second goal of the Soviets with the talks was to promote global stability after the worst phase of proliferation and arms race that also permits them to reduce the budget spent on nuclear weapons when the living standard was quite low in the Union. Basically, the goal of the SALT was finishing the deterrence and superiority-centred policies and eradicating asymmetries and uncertainties in the world order.[25] It might seem contradictory but the last decade and a half of the Cold War can be characterised by a decrease in the intention of deterring the other and a limited arms control by international conventions. Some critical incidents like the above-mentioned Cuban Missile Crisis made the nations of the world understand that limitations are to be put on the arms race and that deterrence does not lead to superiority in the field of atomic bombs. The international public was

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18  SOKOLSKI, H.: The NPT's Untapped Potential to Prevent Nuclear Proliferation; In: H. SOKOLSKI (eds.): Reviewing the Nuclear Nonproliferation Treaty; CreateSpace Independent Publishing Platform, South Carolina, 2010. p. 3.
19  Ibid. p. 4.
20  DAALDER – LODAL op. cit. p. 87.
21  GUARDIAN, T.: North Korea withdraws from nuclear treaty; 2003.
    https://www.theguardian.com/world/2003/jan/10/northkorea1 (downloaded 26 May 2019)
22  SHAKER, M.: The Nuclear Non-Proliferation Treaty: Origins and Implementation, 1959-1979. OCEAN'A PUBLICATIONS, INC., New York, 1980. p. 493.
23  Ibid. p. 524.
24  DOTY, P.: Strategic Arms Limitation after SALT I. Daedalus; Summer, 1975/3. p. 63.
25  Ibid. p. 64.

well aware of the danger of an eventual nuclear war and wanted to keep under control the two superpowers.[26]

### IV. Development of Nuclear Weapons After the Fall of the Berlin Wall: The Rise of New Nuclear Powers in Asia

Initially, the two superpowers of the Cold War, the United States of America and the Soviet Union, were the nations to admit to having nuclear weapons. This 'elite club' was later, in the 1950s and 1960s, joined by the other permanent members of the Security Council of the United Nations, namely the United Kingdom, France and China. Britain and France were not nearly as much of a concern as China was to the Soviet Union and the USA following their 1964 nuclear test.[27] 1964 marked China's entry into the nuclear age. Not many states' nuclear status was as significant as that of China's and still, it protects its importance.[28] Lt Gen Robert Ashley, Director of the DIA, claims that *"China is likely to double the size of its nuclear stockpile in the course of implementing the most rapid expansion and diversification of its nuclear arsenal in China's history."*[29] A parade by China's secretive military in 2019 showed China's astonishing rate of nuclear growth will be showcased to the world and may involve demonstration of a missile which could strike the west coast of the USA within half an hour.[30] According to experts,within a decade, China may have nuclear warheads more than they showed in the military parade. As Kristensen and Korda state, It is unknown what the basis is for this dramatic projection, which implies China could have more than 600 nuclear warheads by the late-2020s.[31] Four more countries are known or suspected to possess these weapons of mass destruction. Despite the exposure of the Israeli efforts in 1986 by Mordechai Vanunu, the State of Israel never admitted to producing such arms. The same applies to the Democratic People's Republic of Korea.

The global strategies of nuclear deterrence re-emerged in the 1990s in South Asia as a respective means of India and Pakistan. In both countries on the subcontinent, scientists started to work on the issue of producing an atomic bomb in the 1950s and the first official tests were conducted on May 1998. India, as a crucial member of the Non-Aligned Movement, did not intend to deter its neighbours until the end of the Cold War and developed an interest in nuclear weapons as a side-effect of its peaceful nuclear energy program, whereas Pakistan turned to the atomic bomb as a tool to relieve its national pride and its role as a leading country in the region and the Islamic World after the loss of what was East Pakistan and what is today known

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[26]   ARBATOV, A.: An Unnoticed Crisis: The End of History for Nuclear Arms Control? 2015. https://carnegieendowment.org/files/CP_Arbatov2015_n_web_Eng.pdf, p. 5. (downloaded 22 May 2019)

[27]   O'NEIL op. cit. p. 45.

[28]   ANDERSON, N. D. – DEBS, A. – MONTEIRO, N. P.: General Nuclear Compellence: The State, Allies, and Adversaries; Strategic Studies Quarterly, 2019/3. p. 106.

[29]   HENNIGAN, W. J. – WALCOTT, J.: Time; 2019. https://time.com/5597955/china-nuclear-weapons-intelligence/ (downloaded 30 September 2019)

[30]   MCDONALD, J.: Independent; 2019. https://www.independent.co.uk/news/world/asia/china-military-parade-national-day-nuclear-weapon-missile-trump-us-a9124966.html (downloaded 30 September 2019)

[31]   KRISTENSEN, H. M. – KORDA, M.: Chinese nuclear forces, 2019; Bulletin of the Atomic Scientists, 2019/4. p. 171.

as Bangladesh.[32] Though the first debates on the topic of deterrence related to India and Pakistan started as soon as the tests were over, the actual mutual nuclear provocation started only when India and Pakistan began to threaten each other after the Mumbai terrorist attack in 2008, carried out by an Islamic extremist group, the Lashkar-e-Taiba, which is often accused by New Delhi of being supported by the Pakistani government. Indian leaders argued that after this fatal incident, the country has no other option than to punish Pakistan other than by the use of nuclear weapons as a means of deterrence. This strategy obtained spectacular backing from the Hindu nationalist Bharatiya Janata Party, India's largest political party that also won the national elections in 2019.[33]

The primary aim of Pakistan with the development of atomic bombs was deterrence.[34] Authorities of the South Asian Muslim nation never denied that all the efforts in this regard were made in order to discourage their Hindu neighbour. Furthermore, Pakistan even recently announced that they would change their military doctrine from "credible minimum deterrence to full-spectrum deterrence." As Pakistan mainly develops short-range delivery systems, it is evident that their main goal is to deter India and that they do not wish to enter a global deterrence game or inevitable nuclear war.[35]


## V. Nuclear Deterrence Strategies During and After the 1990s

One can say that India and Pakistan play a local or regional game of nuclear deterrence, whereas some other actors are feared to do so on a global level. Though the bipolar world order of the times of the Cold War is not here anymore, one can still speak of an American-Russian opposition in terms of politics, economics and military strategy. The latter also includes the question of nuclear deterrence between the two countries. Despite the fact that both sides reduced considerably the number of nuclear warheads (the USA, for example, dropped the number from 19,000 to 4,650 and Russia from 13,200 to 2,000), the two military powers still keep an amount sufficient for causing enormous damage to the other and to effectively discourage the opponent. According to experts, it is not clear whether the two nations are ready to destroy all of the warheads and related vehicles integrally and they say that further moves are needed for further reduction.[36]

The two major military powers of our planet concluded several agreements after the fall of the Berlin Wall, helping them to get rid of the nuclear armament. These efforts include the START I that was signed in 1991. The last and still in vigour is the so-called New START Treaty that was agreed upon by the parties in 2010 in the Czech

[32] PERKOVICH, G. – DALTON, T.: India's Nuclear Options and Escalation Dominance; 2016. https://carnegieendowment.org/files/CP_273_India_Nuclear_Final.pdf, p. 5. (downloaded May 2019)
[33] Ibid. p. 10.
[34] DAALDER – LODAL op. cit. p. 93.
[35] BISWAS, A.: Pakistan's Tactical Nuclear Weapons: Deconstructing India's Doctrinal Response; Strategic Analysis, 2015/6. pp. 684-685.
[36] KRISTIENSEN, H. M.: Trimming Nuclear Excess Options for Further Reductions of U.S. and Russian Nuclear Forces; Federation of American Scientists, Washington DC, 2012. p. 10.

capital, Prague. This decision will officially last until 2021 and might be replaced by another move. In fact, the nice words on nuclear disarmament in some cases remain on paper and are not reflected in reality. For example, according to the U.S. Department of Defense, the Russians deployed many more warheads following the first START agreement than what was permitted. American military sources add that this step taken by the Russians did not change the American military doctrine; they still count on a second-strike capability policy, meaning that the USA is still considering a "strategic deterrence posture".[37]

In a word, the Russians are not the only ones who do not act according to the agreements. The Americans, despite reducing the number of usable warheads, plan and realise a significant upgrade of the aircraft capable of carrying those warheads. Since 2016, the U.S. government has also been working on extending the life of the existing atomic bombs, especially that of the B61-4 version. In 2019, supposedly, the Americans will also launch a totally new generation of bombs called B61-12 that will be carried by an equally new joint strike fighter.[38] Notwithstanding the dramatic reduction in the number of warheads on both sides, the two military powers still possess more nuclear weapons than any other countries and are more than capable of deterring the other. Undeterred by the numerous limitations, the two nuclear superpowers carry on with tests and developing new weapons. The Russians argue that they only compensate for the significant asymmetry that can be noticed between the two countries on a technological level.[39] Besides the traditional American-Russian opposition, one has to take into consideration certain emerging Asian actors. It is evident that in the present, deterrence-based world order, the United States has to scare China, put pressure on North Korea to force them to stop their research and eventually dismantle their arsenal, as well as keeping the pressure on Iran to do the same.[40] The United States of America has a double policy vis-à-vis the Democratic People's Republic of Korea and that might change as President Donald Trump is aiming at pacifying the Korean peninsula. The two traditional pillars of the America-Korea policy are deterring the Asian country and trying to nullify the effects of the Korean weapons of mass destruction in case Pyongyang wishes to use them against the USA or its allies. There is also an important diplomatic side-effect of this American approach: the two main regional allies, namely Japan and South Korea, have to realise that they highly depend on American deterrence and, of course, they have to be grateful for this protection.[41]

The last Asian nation to be dealt with is Iran. *"Tehran has combat proliferation, been caught working on a weapons program and is enriching uranium, defying the demands of the defying the demands of the IAEA and the UN Security Council to suspend these activities"*.[42] Although Iran ceased its belligerent activities, complies with the Joint Comprehensive Plan of Action and the *"Iranian nuclear weapons threat is not a near-term contingency"*, the United States of America is currently threatening

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[37] Ibid. p. 14.
[38] Ibid. p. 19.
[39] Ibid. p. 28.
[40] BLAIR, B. G. – SLEIGHT, J. – FOLEY, E. C.: The End of Nuclear Warfighting: Moving to a Deterrence-Only Posture an alternative u.s. nuclear posture review; The program on science and global security, Princeton University, Princeton, 2018. p. 13.
[41] Ibid. pp. 27-28.
[42] DAALDER – LODAL op. cit. p. 87.

the Islamic Republic with a possible war.[43] Iran is often considered by the United States of America and the NATO member states to be linked to extremist ideologies and movements. The fear of nuclear terrorism can explain the reason behind the possible overreactions of the West. The 2010 U.S. Nuclear Posture Review also indicates as the main threat the non-state actors possessing weapons of mass destruction.[44] The only missing point in the argument that Iran is dangerous in this regard is credible proof showing a direct relationship between Tehran and some terrorist organisations.

The relationship of the United States of America, the leading global military power, with other nations having or wishing to have atomic bombs can be characterised by a set of traditional and modern conflicts. The U.S., while establishing its current deterrence strategy, has to understand that their opponents are diverse and therefore responses should also differ. There are Russia and China, the traditional other poles during the Cold War, that fight for their 'nuclear survival'; there is an unreliable communist dictatorship, North Korea, and a much more reliable but still keen on its sovereignty Iran. This means that current global nuclear deterrence is nothing more than the answers given by Washington to these challenges and the reactions of the countries concerned. In fact, global deterrence is not a mutual business in which everybody intimidates everybody but a system in which the U.S. frightens all the other actors and the others try to give it back in order to maintain vulnerable stability.

## VI. Conclusion

*"The events of 1998–2008 demonstrated that, in the absence of active arms control efforts, a good political relationship between Russia and the United States, which continued well into the mid-2000s, did not automatically eliminate the harsh strategic reality of mutual nuclear deterrence – regardless of how much it was sugar-coated by political declarations."*[45] Mutual nuclear deterrence between the United States of America and Russia continues to exist and shape the current world order. Moreover, the USA has diverse bilateral relationships of mutual deterrence with certain Asian nations, including China, and tries to convince North Korea and force Iran to give up their nuclear projects. After the Cold War, the political and diplomatic relationship between the two most important nuclear powers, the USA and Russia, was always shifting. Some less favourable ones followed some good periods of time but one can say that even the best ties could not have caused the will of deterrence to disappear. The reason behind this fact is that the international community is rather inactive in this question and there is a visible global lack of arms control. The international organisations, like the United Nations, do not pay much attention to the nuclear arms development projects of the United States and Russia or China and seemingly do not intend to force these powers to cease their research projects. It is obvious that a total and final disarmament is impossible if the technologically most

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[43]  BLAIR – SLEIGHT – FOLEY op. cit. p. 29.
[44]  KROENIG , M. – SLOCOMBE, W. B.: Why Nuclear Deterrence Still Matters to NATO; 2014. http://www.matthewkroenig.com/Kroenig_Why_Nuclear_Deterrence_Still_Matters_to_N ATO.pdf, p. 5. (downloaded 19 May 2019)
[45]  ARBATOV op. cit. p. 8.

advanced nations do not stop their tests. Furthermore, the first step to achieving this goal is the prohibition of such tests.

Bruce G. Blair argues that not only did the mutual deterrence strategy survive the Cold War but it also developed into a deterrence-only posture by the main nuclear powers. He underlines that the United States is now evolving from a deterrence-plus-warfighting strategy towards a deterrence-only strategy. This means that the USA, with its force, had the tendency to deter and target, in the past, chosen locations such as nuclear military units and industrial areas where nuclear weapons are produced. In the present doctrine, the USA forgets about the old strategy of nuclear warfare planned between the two armies and opts for targeting lighter locations like banking, communication and transport networks, saving military installations but hitting the state infrastructure and eventually endangering civilian populations.[46] Anyhow, the basic idea of deterrence still characterises the way in which the decision-makers think and it is more prevalent than during the Cold War when the deterrence issue was kept under control by the international community.

As long as nuclear strategies are based on deterrence and technological supremacy, it is impossible to even think about substantial nuclear disarmament. Nuclear weapons have always been discussed by the world's States, but they have never been given up. The world, anything nuclear-related, appears to be the way the world is heading. Arms control agreements serve a purpose far beyond the paper they're written on. Countries who have nuclear weapons should be aware of the increasingly intertwined situation of nuclear weapons. However, efforts to reduce these risks are not considered a priority. It focuses mainly on enhancing military facilities and capabilities and deterrence. For today, however, the governments of countries with nuclear weapons are not willing to sit at the same table. China is focusing on long-term qualitative development in its nuclear arsenal, while India and Pakistan are developing both their nuclear weapons stockpiles and missile facilities. North Korea, on the other hand, increased its nuclear weapons last year compared to 2015, increasing the number from 10 to 20. North Korea has conducted several unexpected nuclear tests during the last year. There is no prospect of any further cooperation or disarmament on nuclear weapons reduction anytime soon, but efforts to increase nuclear capabilities are continuing rapidly. The world may not be as lucky this time as it was in the Cold War when nuclearisation persists. To attain this goal, the international community has to act and put limitations on the nuclear powers in the form of new global agreements which totally forbid all research in the domain and oblige the parties to change their doctrines to eliminate all reference to deterrence.

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[46] BLAIR – SLEIGHT – FOLEY op. cit. p. 53.

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VIRÁG SZALÁNCZI-ORBÁN – ÉVA BEKE

# THE FUTURE OF DISTRIBUTED PRODUCTION AND THE IMPORTANCE OF NEW SUPPLY CENTERS IN CENTRAL AND EASTERN EUROPE

*Abstract*

The logistics sector is undergoing constant change. Diverse, integrated, interdisciplinary systems and models can be created and applied by involving different sectors and disciplines. Technical and technological innovations, development plans for transport networks, and the transformation of networks have a global impact on trade. Logistics networks are creating new structures. Current trends and developments show that production and supply centers in Europe may shift. New opportunities and new directions are emerging, with which we can talk about the establishment of new logistics and infrastructure centers and nodes of outstanding importance in the region of Central and Eastern Europe and especially in the V4 countries.

*Keywords*: distributed production, new supply centers, networks, V4 region, infrastructure

## Preamble

The globalization, lack of resources, changes in purchasing behavior and urbanization are all having an impact on the new competitive situation in all industries. It also brings significant changes and opportunities for the industry. In order to make the V4 region's competitiveness attractive and continuously maintained, it is necessary for the actors to cooperate, to take continuous and systematic smaller development steps, on the basis of which larger development activities can also start. With the increase in world trade volumes, continuous new challenges and new technologies have made logistics processes more complex. European logistics providers face huge problems because their business forms are based on traditional models that will not be able to keep pace with changing logistics networks. Technological development, integrated systems, automation, artificial intelligence are gaining ground not only in this sector, but also globally. New automated systems are becoming more affordable in the face of rising wages. Sustainability as a set of criteria also poses new challenges, forcing businesses to look for ways to reduce their environmental impact, such as local sourcing. We also know that the life cycle of products is further shortened, which also encourages companies to develop new products and deliver them to their customers faster. The distance between production and consumption can be a factor in competitiveness. Better access to information and data for all, including logistics systems, can lead to the development of a so-called smart logistics network from recorded data. At a time of decentralization and individualization of production, logistics tasks will be more flexible and intelligent to better optimize costs, time, and resources. Only in this way can logistics create value for the customer in the future by delivering the right product, at the right time, in the

right place, in the right quantity and quality. Further trends and current events also show that the logistics sector is undergoing significant changes, of which the distribution, transformation of distribution networks, the role and situation of the V4 countries are analyzed in the framework of this study. The analysis and study were based on a number of scientific secondary data, articles and other sources. For a more comprehensive interpretation of the topic, we would like to present the possible directions for the projected prospects and challenges by processing the existing data, using reports and diagrams.

### Infrastructure environment (Connecting Europe Facility)

One of the factors involved in the transformation is the revalued and reorganized infrastructure environment. Infrastructure includes not only the digital, transport and energy sectors, but also renewable energy production, energy distribution, and everything that the private sector treats as infrastructure investment. In addition, research, development and innovation, resource efficiency are included, as are opportunities for overseas transport.

Traditionally, overseas products arriving in Europe are transported to one or two major ports. As we know, if we look at freight volumes, 74% of goods come by sea. Three of the 15 busiest ports in the world are in Europe. If we look at the distribution and supply that goes from there, to simplify transport to ports through distribution centers, taking into account the modes of transport, it turns out that service providers and logistics operators pass on goods to Europe mainly by truck.[1]

Because of the above mentioned data globalization and the introduction of Industry 4.0 will require the change of the entire logistics management system to become "Smart Logistics" system, what includes but not limited to smart transportation system, resource planning, warehouse and station management system and also a safe and real-time information system. ITS is a fairly new concept in transportation, since it combines not only infrastructure, operation and control system, but aims to increase a reliable and safe transportation field with reduced traffic jams, accident rate and less air pollution. As mobility has utmost importance in the global market, so as transportation, what can be used for efficient warehouse management, supply chain, intelligent truck parking with sensor systems to gather real-time data for better operation. Smart resource planning will enhance productivity and agility. It also reacts faster to any changes might occur in the supply chain and able to optimize resources accordingly. Warehouse management is also a vital point in smart logistics, as a total coordination and alignment is necessary, where just-in time optimization will encompass a just-in time delivery system.[2]

Therefore, investments and co-operations are needed that are able to implement new networks and distribution systems and centers by adapting the achievements of Industry 4.0. Increasing competition between sea and land corridors not only reduces

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[1] European Commission: €11.9 billion to improve European connections; 11 9 2014. https://ec.europa.eu/transport/themes/infrastructure/news/corridors_en (downloaded 15 February 2020)

[2] BARRETO, L.– AMARAL, A.– PEREIRA, T.: Industry 4.0 implications in logistics: an overview; https://doi.org/10.1016/j.promfg.2017.09.04 (downloaded 27 January 2020)

transportation costs and encourages international trade, but forces many governments to reevaluate their land connections and seek shorter transit routes. Existing land routes will also be expanded. Routes of transit through difficult terrain are being investigated in order to establish full terrestrial continental connections. Such an extension of the land network is encouraged by economic globalization and interregional cooperation as well. It will eventually become multimodal transcontinental corridors for rail, road, pipelines and private networks.[3]
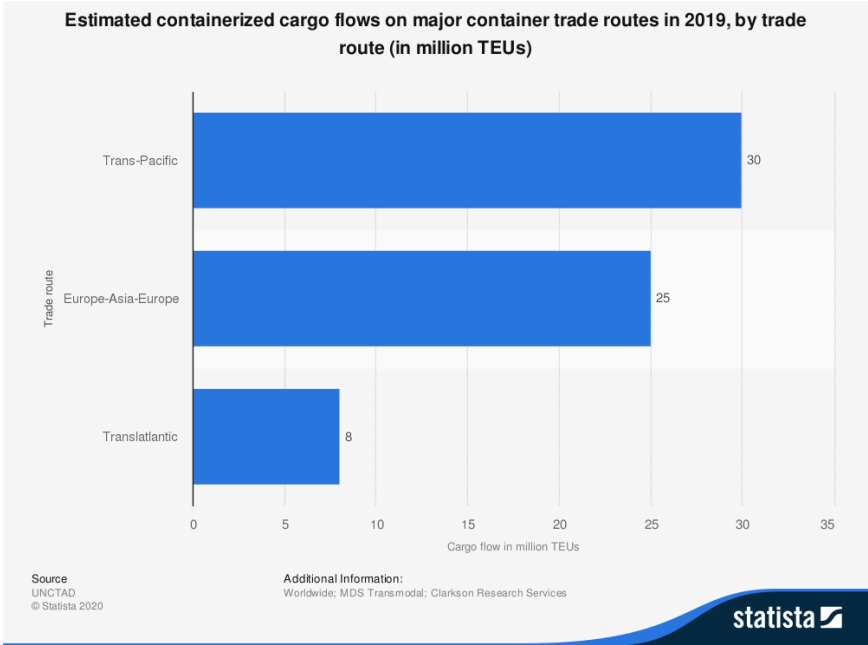
**Estimated containerized cargo flows on major container trade routes in 2019, by trade route (in million TEUs)**



*Figure 1: Review of Maritime Transport 2019*[4]

As the above data shows alone in 2019 over 30 million TEU's (Twenty-foot Equivalent Unit) of cargo are expected to be shipped Trans-Pacific, making its route the largest shipping zone in terms of load size. Asian markets are on the rise as they are the home of the world's leading container ports. The largest container ship fleets are also registered there.[5]

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3   Hofmann, Erik– Rüsch, Marco: Industry 4.0 and the current status as well as future prospects on logistics; https://doi.org/10.1016/j.compind.2017.04.002 (downloaded 29 January 2020)
4   Source: United Nations Conference On Trade And Development (UNCTAD) Review of Maritime Transport 2019
5   Witkowski, Krzysztof: 7th International Conference on Engineering, Project, and Production Management, Internet of Things, Big Data, Industry 4.0 – Innovative Solutions in Logistics and Supply Chains Management; University of Zielona Gora, Licealna 9, 65-417 Zielona Gora, Poland
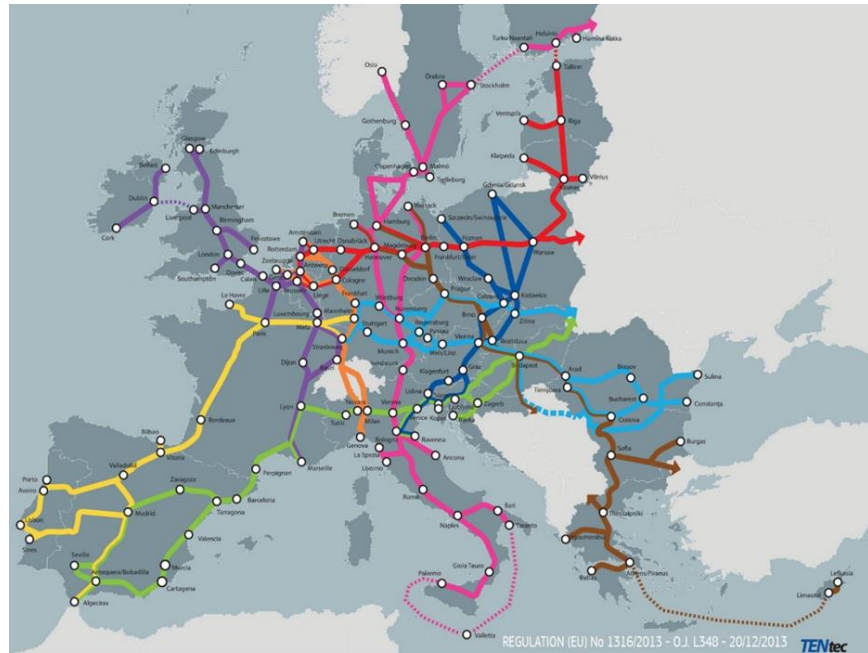
*Figure 2: Corridors in Europe*[6]

Figure 2 shows the well-known corridors. The development plans and projects of the European Network Financing Facility (hereinafter CEF) anticipate and envisage steps and regulations in the transport, energy and telecommunications sectors. The first targets and regulations are for 2030. With regard to transport, the goal is to make better use of resources, reorganize transport routes, modernize them, create new core networks, increase performance and digitize. The project will integrate modes of transport and create new connections.[7] According to the CEF's further projections until 2050, further developments are also expected in terms of catching up and making intermodal road transport and rail connections. The Danube will also remain a permanent priority area as an infrastructure suitable for water transport.

These developments and trends, new core networks, intermodal nodes, digitalisation and networking and all current trends are fueling a significant change in the shift in production in Europe. However, before changing production sites, outlining new structures, we need to make a small detour to the role of networks and networks in the logistics sector, especially in light of scale-independent and complex networks.

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6    European Commission: Trans-European Transport Network; 2015. https://ec.europa.eu/transport/infrastructure/tentec/tentec-portal/site/maps_upload/SchematicA0_EUcorridor_map.pdf (downloaded 29 January 2020)

7    European Commission: Investing in European networks – Five years supporting European Infrastructure; 2019. https://ec.europa.eu/inea/sites/inea/files/cefpub/cef_implementation_brochure_2019.pdf (downloaded 29 January 2020)

**Networking**

If we want to understand a complex system such as the relationships between the distribution and supply chain and the logistics sector, we need to know the relationships between the parts, the circuit diagram of the system, where the relationships between the components called edges. The edges of a network can be directional and uncontrolled, but they can even be both at the same time in some cases. There are many and varied networks in our environment. In a network, the degree is a defining property of the point (the number of connections between the point and the other vertices of the network.[8]
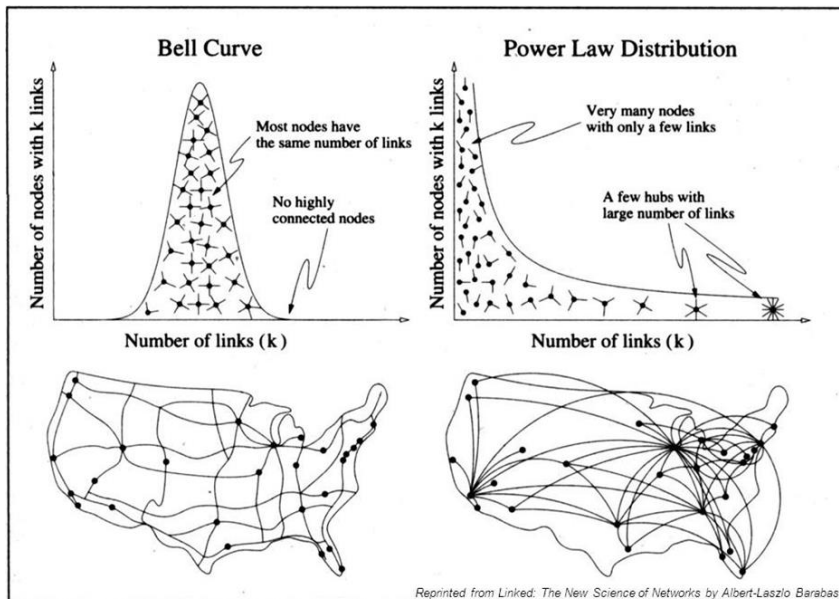


*Figure 3: Presentation of scale-independent and random networks (**random on the right, located on the scale-independent left**)*[9]

Figure 3 shows a representation for understanding the differences between scale-independent and random networks. In a random network, most nodes have the same or a very similar number of connections, no large degree distributions. An example of this is the road network map - which can be seen on the right side of the figure - that most nodes have only a few connections. However, for scale-independent networks (left side of the figure), we can find many nodes with few connections and some concentrated nodes with significantly large connections. It is like the air transport network depicted, where airports are considered as hubs and the flights between them are the connections. We know that most of the airports in the United States are small airports, however, there are some airports with outstanding traffic, with many connections (Chicago, Los Angeles, New York). When traveling through these

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[8]    BARABÁSI-ALBERT László: Behálózva; Helikon Kiadó, 2013
[9]    BARABÁSI-ALBERT László: Véletlen és skálafüggetlen hálózatok; In: BARABÁSI-ALBERT László: Behálózva; Helikon Kiadó 2013, p. 79

centers, it is sufficient to travel by touching a center point, and this is important because the distances in scale-independent networks are smaller than in an equally random network. This recognition can also be applied to the logistics sector. László Barabási-Albert adds two items to the existing knowledge about scale-independent networks, one is entry in time, the other is the connection according to popularity. When a new entrant joins the network, it will most likely connect to a large node, so whoever logged in on time is more likely to achieve better results. It was found that there are no growth constraints in scale-independent networks. It can be concluded that group formation and a high degree of concentration in such networks can have specific and unique consequences. Examples include increased propagation speed and performance. It follows that, in this way, the competitor that enters later, which appears in the complex system, gives a chance for the better-expanders to gain an advantage.[10]

In logistics, if we look at the methodological approach, we distinguish two types of networks. One is transport routes, or are interpreted as networks that map infrastructure; the other is non-infrastructure networks, that is, all connection networks implemented on physical networks. Logistics providers and their relationships are considered cutting edge in terms of network science. If we analyze physical and non-physical logistics networks, nodes, and connections, the presence of scale-independent networks in logistics can be inferred. This network approach and its transfer to the logistics sector is important because it can become a useful tool for logistics. By understanding the networks and knowing the specific properties of the networks, we can, among other things, recognize optimal layouts, shorten connections, and increase economic efficiency.[11]

It is formed by understanding and analyzing logistics networks, interpreting the relationships between physical and non-physical logistics networks. It is an environment that, when analyzed in conjunction with global impacts and trends, as well as ongoing investments and regulations, transformation within the sector becomes visible and predictable.

### The Amazon effect

Translated into a more practical example, and to understand the fragmentation of production sites and the transformation of distribution structures, we would show the impact of Amazon. Several European manufacturing centers deliver products in smaller quantities over shorter distances through regional distribution centers and urban junctions through a new and non-traditional transport vehicle fleet to meet local needs. This fragmentation of logistics networks can actually be called the Amazon impact.[12]

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[10]  BARABÁSI-ALBERT LÁSZLÓ: A skálafüggetlenség. A Barabási-Albert-modell; In: A hálózatok tudománya; Budapest, Libri, 2016, pp. 131-198.

[11]  Dr. KARMAZIN György: A logisztikai szolgáltatók stratégiai sikertényezői; Akadémia kiadó, 2016. pp. 125-135.

[12]  CNBC, 2017. https://www.scmp.com/tech/e-commerce/article/2109113/map-shows-how-quickly-amazon-has-expanded-europe (downloaded 03 February 2020)

In terms of net sales, Europe is Amazon's largest market, accounting for more than half of its international business; here we are talking - of course -, about its role in e-commerce. Amazon's European business runs from Luxembourg and operates through more than 50 implementation centers across Europe.
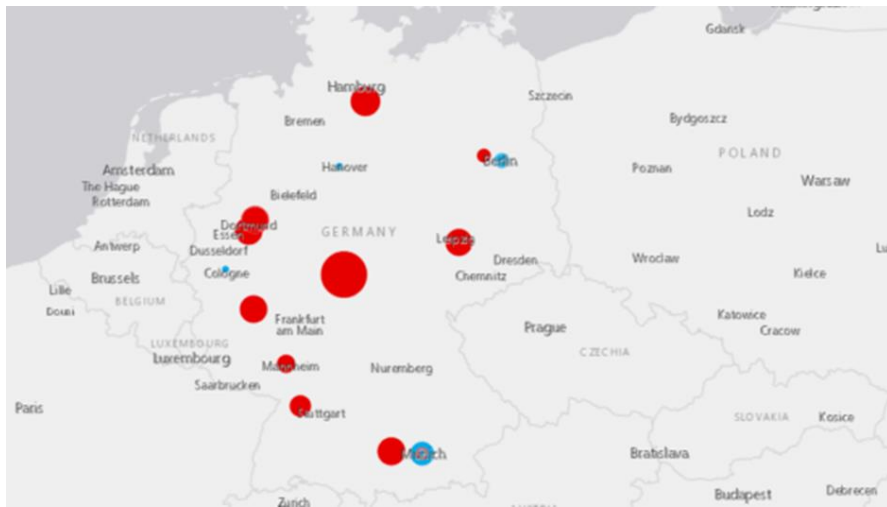


*Figure 4: Size of Amazon distribution centers in Europe* [13]

It is true that it operates through 50 implementation centers across Europe, but the size of distribution centers varies across the continent, as Figure 4 shows. The junctions are clearly visible and the most important center in Germany is a priority junction.

Such fragmentation and intra-continental location of distribution centers also supports the assumption that previously used network structures will be transformed and distribution centers will relocate.

Amazon uses a variety of delivery services for deliveries. It relies on long-distance and postal services, integrators and parcels, taking advantage of the specifics of regions and local services. So far, the last mile delivery has not been organized; however, this will be an expected step in the future. In addition to land delivery services, there is also a significant air transport network. The geographical footprint of which Amazon is increasingly trying to extend to this continent. The company is focusing on introducing same-day and up to two-hour delivery services.[14]

In addition to the link between the fragmentation of distribution centers and the reduction of delivery times, this type of business approach also points in the direction of further growth in the aforementioned digitization and industries and technologies

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[13] HORST, Frederic: Cargo Facts; CON, 2019.
https://cargofacts.com/allposts/business/strategy/does-amazon-really-matter-to-intra-european-express-postal-courier-and-ground-transportation/ (downloaded 03 February 2020)

[14] Ibid.

implemented and developed by Industry 4.0. These systems and systems also facilitate smart cities, smart grids, smart logistics, and smart resource planning, integrated systems and just in time delivery.

### Order of distributed production

Based on what has been stated so far in the study, we see that the new infrastructural directions: – including mainly CEF projects – are also being transformed. This is due to the changed investment and economic environment, changes in networks and network designs, new approaches and directions – the Amazon impact – and the impact of inevitable technological changes. Logistics interests in Europe, the logistics sector and supply distribution chains, physical and non-physical logistics networks will also change.
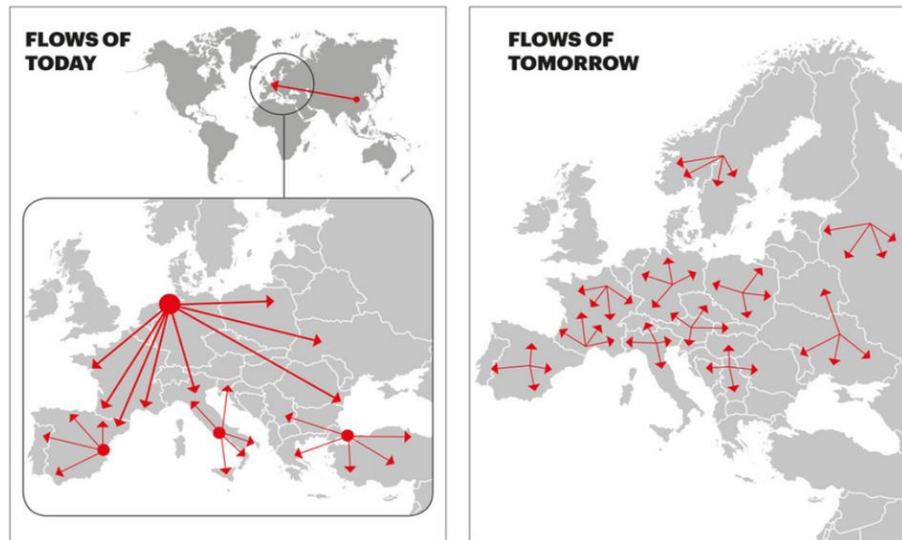


*Figure 5: Distributed production in the future (partly own editing)* [15]

In Figure 5, we can see a distribution representation that might characterize the present and then the future. The three major ports and distribution centers from the Mediterranean, which are already mentioned above, are the largest hubs in the network. We know that the systems, airports and ports of Western Europe are becoming more and more congested, and at the same time, it is becoming more and more difficult to increase capacity.

To sample and support the new and changed supply and distribution system depicted, the following facts were established. The reorganization and development of the physical networks and the transport and physical routes used so far is underway.

[15] Accenture: Accenture, A changing world for European logistics providers; 2018.
https://www.accenture.com/us-en/insights/strategy/changing-world-european-logistics
(downloaded 03 February 2020)

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These physical networks significantly change the proven and used distribution routes, thereby relieving and reducing the congestion of existing nodes. This kind of transformation can lead to the formation of new significant nodes and more complex systems in the logistics network. Assuming that these new fragmented nodes and distribution centers will not emerge as entirely new nodes because of popularity connection and previously explained theories and network science findings for new entrants, but larger nodes on the existing network may grow. This creates a new node structure. In the course of our research, we have come to the conclusion that shifting production and hubs are creating new opportunities for the V4 region to become a dominant hub on the continent. In a more fragmented freight network, that primarily meets local needs, in a shifted system; a significant node in the network may emerge in the V4 region.

The history of the Visegrad Four Countries – the Czech Republic, Poland, Slovakia and Hungary – dates back centuries. The countries maintain close trade, industrial and diplomatic cooperation, thus playing a key role in the regional economy of Central and Eastern Europe. [16]Of course, their territorial cooperation also has logistical implications that could further enhance the growth of the role of the country group. If the V4 region succeeds in acting as a major network node, it will be able to attract new entrants to its network, among other things, on the principle of popularity.

In addition to the situation within Europe, we need to look at another important impact, namely the reasons for the shift towards the V4 region. This effect is the New Silk Road. This historic project could have a significant impact overall, especially in relations between the European Union and China. As the countries of Central and Eastern Europe are geographically located between Western Europe and the Asian continent, it is clear that they will play a significant role in building this phase of the Belt and Road Initiative. This project is also important for the V4 group of countries, as new land and sea routes can boost the region's economy. One of China's economic goals is to enhance cooperation with Eastern Europe. One of the main corridors is rail links through Eurasia, and the other is a new maritime transport route from Southeast Asia and Africa to European shores.[17]

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[16]  BEKE, Éva: Industry 4.0 and its risks in the state administration, corporate and medical sectors; National Security Review: Periodical Of The Military Security Service, 2018. pp. 98-110.

[17]  Hong Kong Trade Development Council: Hungary: Leading the Way in BRI Co-operation; 15 06 2017. http://economists-pick-research.hktdc.com/business-news/article/Research-Articles/Hungary-Leading-the-Way-in-BRI-Co-operation/rp/en/1/1X32LK39/1X0AAEGE.html (downloaded 21 December 2019)
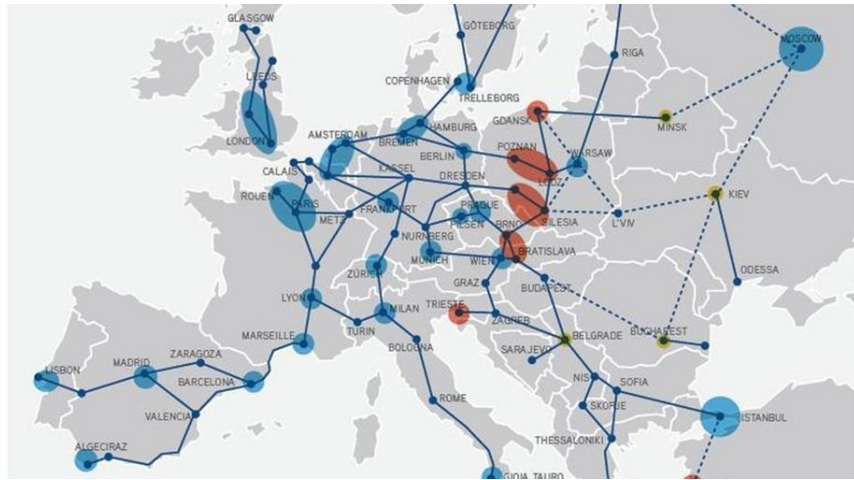
*Figure 6. New distribution focus* [18]

The new routes thus repeatedly show a shift in the focus on distribution to the Central European region (red marking in Figure 6), where new logistics hubs and nodes may emerge. The New Silk Road project will significantly change the previously known freight transport routes.[19]

The effects and changes that can be seen within Europe and from the Asian region also point in the direction that the logistics and economic role and strength of the Central European region, the V4 group of countries, will increase. New significant and attractive logistics hubs could emerge in this area.

**Safety and Security of Supply chain**

Security of supply chains and the protection of critical infrastructure are closely linked. Pursuant to the provisions of the Act on Critical Infrastructures, adopted on 12 November 2012[20] (Act CLXVI of 2012 on the Identification, Designation and Protection of Critical Systems and Facilities), the following critical infrastructure sectors are distinguished:

    1. Energy
    2. Transport
    3. Agricultural economy
    4. Healthcare
    5. Social security
    6. Finance
    7. Info communication technologies
    8. Water

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[18]  SZALÁNCZI-ORBÁN Virág: Magyarország és az Európai Unió közlekedési hálózatának fejlesztése és annak logisztikai hatása; Külügyi Műhely, 2019. pp. 7-19.
[19]  Ibid.
[20]  2012. évi CLXVI. törvény a létfontosságú rendszerek és létesítmények azonosításáról, kijelöléséről és védelméről

9. Defense
10. Public safety protection

These sectors also include a number of sub-sectors. In this interpretation, supply chain security is more closely linked to the protection of transport and info communication technologies. Due to the complex interpretation of security, it is worthwhile to expand the sectors and sub-sectors, in some cases to include other sectors and to examine them with a systems approach due to the interdisciplinary. Potential risks, threats, emergencies and security issues go beyond the transport and info communications technologies sector due to the close collaborations in the supply chain and the diversified sectoral and sub-sectoral links.

Different hazards and risks affecting the supply chain and system can be distinguished: Physical risk, cyber risks, human risks.[21]

Among these risks, we would highlight some risks and sources of danger in the present study.

According to the network science approach and the rules and relationships of scale-independent networks by László Barabási-Albert, in the interpretation of the logistics network and its nodes and connections, the network can also be affected by various threats and risks. Examples include eroding a node, failing (attack tolerance), or declining networks. Hubs and major nodes play an important role in a network as a cohesive and interconnected supply chain and logistics network, so if a large number of nodes (larger hubs, nodes) fail to operate can result in a serious problem. In a normally functioning network, there is little chance of such a failure occurring. The failure of a larger node does not yet fragment the network, and a targeted attack on the networks requires reliable knowledge of the network topology. In the case of a targeted attack, however, removing multiple centers would already result in rupture and disintegration into groups.[22]

According to the risks and attack points of the supply chain and logistics systems in the transport sector, we deal primarily with the transport sub-sectors (road, rail, water, air, pipeline), with a special emphasis on distribution processes. Transport and infrastructure are an essential and integral part of the supply chain, and their failure or disruption results in a serious problem, either temporarily or in the long run. These systems and constituents (transport networks, their control and monitoring equipment, rules and standards, human resources…, etc.) are exposed to complex risks: accident risk, natural disasters, breakdowns, terrorist threats, crime, cyber-attacks, logistical disasters… etc.).[23]

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[21]  Tranportation Systems. Critical Infrastructure and Key Resources Sector-Specific Plan as input the National Infrastructure Plan. Department of Homeland Security, Arlington, 2007. p. 288.
[22]  BARABÁSI-ALBERT László: A hálózatok tudománya; Budapest, Libri, 2016, pp. 302.
[23]  NAGY, Rudolf: Research on theoretical and practical issues of critical infrastructure protection; Doctoral (PhD) dissertation Budapest, National University of Public Administration 2011. http://uni-nke.hu/downloads/konyvtar/digitgy/phd/2011/nagy_rudolf.pdf (downloaded 03 February 2020)

The following areas are particularly risky within the system:
- terminals in the transport sectors
- railway stations (railway, bus)
- airports
- ports
- intermodal hubs
- passenger hubs
- traffic junctions and border crossing points
- track elements of transport sub-sectors (tunnels, bridges, overpasses, switches
- fuel and energy supply systems
- information control and operating equipment
- logistics centers
- tools and resources in use[24]

From this list we can also see that if such area and network element, nodes are damaged, disrupted, lost in a centralized (Western European shift Figure 5) supply chain, a greater threat can be assumed than in a more fragmented, distributed, local regions.

In order to guarantee the security of the supply chain and supply processes, it is essential to make the individual members and participants and system components fundamentally secure, to maintain these levels, to analyze risks, and to have and comply with security regulations. Analysis and review of physical, cyber and human risks.

*"Security in the logistics chain requires a coordinated approach between the public and the private sector. The government is responsible for providing the infrastructure and services needed to ensure an acceptable level of physical security (security) as well as guaranteeing the proper functioning of transport infrastructure services (safety) under normal conditions as well as in the event of a natural disaster. Meanwhile, the private sector is responsible for implementing the internal security measures and support needed to ensure adequate risk management and functioning of its processes."[25]*

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[24] PRÉCSÉNYI, Zoltán– SOLYMOSI, József: The identification of Europian critical infrastructures on the road towards defense; In: Military Engineer, March 2007/1.

[25] Security in the logistics chain and its impact on Mesoamerican competitiveness: Facilitation of transport and trade in Latin America and the Caribbean; 2011/8. p. 2. https://repositorio.cepal.org/bitstream/handle/11362/36316/1/FAL-300-WEB-ENG_en.pdf (downloaded 03 February 2020)

| Safety and security challenges | | |
|---|---|---|
| **Physical** | **Cyber** | **Human** |
| limited navigation and mapping technologies in less developed areas | cyber espionage | luck of search and rescue operation |
| hydrographic | sabotage | luck of definitive communication |
| inadequate port infrastructure | ransomware or malware attacks | military or political forces en route |
| weather | artificial intelligence system hacking | organized crime and international terrorism |
| contamination of cargos | | |
| road blocks | | |

*Figure 7: Safety and security challenges*

In order to prove how real all are all of the above-mentioned challenges, we bring a couple examples:

In the Arctic, the global positing system (GPS) is rather limited by the satellite coverage. Further to the point, traditional magnetic compass loses north for obvious reason; safe navigation along with uncertain hydrographic cause a great risk of safe travel.

Poor port infrastructure can also be a major risk factor, for numerous reasons: guarding the cargos can be an imperative, as well as settling for safe land transportation hence the luck of truck drivers globally.[26] Without reliable scheduling goods can go bad or do not reach their targets on time, further unbalancing the present volatile global economy.

In some parts of Mexico, gang robbery is still a major safety factor for logistics of any kind.

In 2017, 20 ships in the Black Sea signaled that their GPS might have been hacked showing their locations in 32 km away inland. Usage of older operating system can also cause major cyber security risks as they are not prepared to defend their systems.[27] Many times the cyber-attacks happen without noticing it, until it damaged or sabotaged the navigating system.

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[26] GALINDO, Domingo Laura: The Challenges of Logistics 4.0 for the Supply Chain Management and the Information Technology, https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/2396477 (downloaded 03 February 2020)

[27] Cyber Security and the Threat to Logistics, Confronting the Demands of Cyber Security and Data Privacy in a Networked Supply Chain; https://www.cybercitadel.com/cyber-security-and-the-threat-to-logistics/ (downloaded 03 February 2020)

**Conclusions and recommendations**

Hitherto known and traditional networks and solutions are changing, business processes are transforming. An important goal is the development of info communication systems, digitization and technological catching up and unification in the field. In addition to existing and long-established transit routes, new connecting routes and routes will emerge, which should be taken into account in future infrastructure (CEF) developments. In our opinion, the regional interconnection of transport policy and development, especially the V4 group of countries, should be examined in order to strengthen its economic weight and relationship by creating a more favorable situation, including the development of logistics networks.

In addition to the development plans, impacts, new technological solutions and routes presented so far, many other aspects and impacts point in the direction that the known supply system and chain will change and shift in Europe. The congested network in Western Europe needs to hand over some of the growing volumes in order to relieve the burden on these former nodes. The relocation is also supported by the fact that network-financing instruments can also strengthen the development of the region. and by developing new directions and routes, harmonizing developments, significant nodes can be established in other regions that have not been included so far. From the fragmentation of production sites and the changes in distribution networks and strategies, as well as from the monitoring of trends, we can conclude that more distributed, articulated nodes are emerging. In addition to the forecast based on impacts and trends within Europe, if we also study the relevant China New Silk Road project, we can be increasingly confident that logistics distribution and supply networks will shift to the Eastern European region.

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GRÉTA VANESSZA VÁRADI – BENCE GÖBLYÖS

# THE PARTICIPATION OF THE HUNGARIAN AND ITALIAN ARMED FORCES IN INTERNATIONAL MISSIONS AND OPERATIONS

*Abstract*

It is beyond doubt that in today's security environment (when it comes to participation in missions and operations) Italy is one of the major stakeholders. The aim of this essay is to examine whether the often-used expression 'presenzialismo' is also applicable to Hungary's participation. With the method of going through the contribution to missions and operations of main international organizations, the goal is to prove whether Hungary's participation is or not comparable (proportionately) to Italy's actions to their respective power and opportunities. One of the main findings is that the two countries' areas of interest are almost identical. They also share a common view of considering NATO as the main partner in safeguarding the security of the transatlantic region. There is an ongoing reform in the armed forces of both nations, but these shall not result in the weakening of the participation in missions and operations. Nevertheless, Italy's participation is way too more conspicuous; we found that proportionately Hungary does not fall short significantly of Italy's contribution.

*Keywords*: Hungary, Italy, international missions and operations, presenzialismo

## Introduction

The purpose of this essay is to examine the presence of the Italian and Hungarian armed forces in international missions and peace support operations, its changes and tendencies in the period of between 2015 and 2020. Numbers of the two countries might differ, as Italy is considered middle power, whilst Hungary is a small power. [1]

The scientific discussion about small and middle powers is being studied by various researchers. According to Mihály Simai, there are three levels to be distinguished in today's world politics of multipolarity. These are the level of leading nations, middle powers – as Italy – and small powers, such as Hungary. According to the researcher, level and role of small powers are harder to be defined than those of middle powers. He claims that this level also includes mini- and microstates that are the most vulnerable in the international relations. They share a common goal though, to sustain their status and existence in the shadow of the commanding nations of the world's economy and political processes. [2]

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[1]   MOLNÁR, Anna: 2018. Olaszország biztonsági kihívásai és stratégiai irányai; Felderítő Szemle, Budapest, 2016/3. pp. 91-111. ISSN 1588-242X.

[2]   SIMAI, Mihály: A szuverenitás a XXI. század formálódó multilaterális rendszerében; 2013. http://www.matud.iif.hu/2013/04/11.htm (downloaded 30 March 2020)

In an essay published in 1984, Carsten Holbraad discussed the difficulties of categorizing middle powers, as they have divergent interests and vastly different influence and policies in the theatre of world politics, decision-making and economy. According to him, the comparison of a former leading power that has degraded to the middle power level and a country that has elevated from being a small power to the middle power level is simply pointless.[3]

In their joint essay, Nikolett Garai, Júlia Koncz-Kiss and Máté Szalai defined small powers and their opportunities. They suggest using two different definitions. According to the first one, small powers are those who have restricted access to certain resources. The other definition underlines the lack of decisive power in the international relations. The international system is therefore divided to weak and strong states and small- or big-sized weak countries. Elaborating their quantitative analysis, they relied on the definition of small states of Maurice East. This states that small powers are those, which have negligible to small economic, military power, population or territory.[4]

Summarizing the position of a country in the theatre of international relations is based on classical power assets. These are the followings: economic situation and structure, population, geographic position and features, culture, or the size and power of armed forces and power projection capabilities.

The aim of this essay is to highlight the differences, similarities and tendencies of the participation of the two countries in international missions and operations. The contributions to these kinds of activities are indicators of the countries' external focal points and geostrategic interests. The goal of this essay is also to provide an overview on the participation of the two countries compared to their respective size of their armed forces and their economic capabilities. It is also important to identify those missions and operations in which Italy and Hungary are more and less active. The method of this is the examination of contribution to the missions and operations of the international institutions that are the most important when it comes to the security of Europe and the transatlantic region, thus not taking into consideration operations and missions commenced under bilateral mandate.

The expression 'presenzialismo'[5] (can be translated as presence policy) is often used to describe Italy's international participation. After our evaluation, we will determine if this expression can or cannot be used to describe Hungarian participation in the missions and operations conducted.

The most important Hungarian researchers regarding Italy's missions and operations abroad taken into consideration are Anna Molnár and Viktor Marsai. The

3   HOLBRAAD, Carsten: Middle Powers in International Politics; Palgrave MacMillan, London, 1984. ISBN 978-1-349-06865-4
4   GARAI, Nikolett– KONCZ-KISS, Júlia – SZALAI, Máté: A kisállamok lehetőségei és kihívásai a 21. században; Külügyi és Külgazdasági Intézet, Budapest, 2017. ISBN 978-963-7039-42-3
5   TRECCANI: Prezenzialismo; https://www.treccani.it/vocabolario/presenzialismo (downloaded 16 May 2020)

participation of the Hungarian Defence Forces is researched by Zoltán Szenes[6], former Chief of the General Staff, József Padányi, Gábor Boldizsár[7] and others.

For the sake of lucidity and intelligibility, the first chapter of this essay is destined provide a general overview of the countries' participation in missions and operations prior to introducing the thorough examination of the details of the contributions for the efforts of each international organizations.

**General overview of the presence of Hungarian and Italian military personnel in missions and operations**

Before introducing the contributions of the two countries in the internationally-led missions and operations, we shall look at the size of the armed forces of Italy and Hungary. Taking the two countries active military personnel (excluding reserves) into consideration based on The Military Balance of 2020, Hungary's armed forces consists of 27,800 soldiers, while in Italy this number is 165,000.[8] It is to be highlighted that according to the White Paper of 2015 signed by Roberta Pinotti then-Defence Minister, Italy aims to further reduce its active military personnel to around 150,000.[9] Taking a glance at Figure 1, it is noticeable that the two countries deploy similar percentage of their armed forces to international missions and operations. However, Italy is considered to be a medium power (or one of the leading powers in Europe), and Hungary is a small power, both countries fail to commit 2% of their yearly GDP to defence expenditures. To compensate, they are both deploying a massive amount of troops to missions and peace support operations. According to the data provided by The Military Balance of 2020, Italy is the 12th biggest spender in the world, and the 4th in Europe on defence expenditures.[10] In 2019, Hungary spent about 1.2%, whilst Italy spent 1.35% of their GDP on defence. Of course, these are highly different sums by their volume. This 1.2% in the case of Hungary means about two billion dollars, while Italy spends more than ten times as much, naming twenty-seven billion dollars. This means that Hungary spends about 62.000 dollars per military personnel, while Italy's expenditure is about 160.000 dollars per soldier. This ranks Hungary as the 21st country in Europe, and the 15th amongst European NATO-countries.[11]

6    Szenes, Zoltán: A békefenntartás hatása a magyar haderőre; 2006.
     http://mhtt.eu/hadtudomany/2006/3/2006_3_1.html (downloaded 30 March 2020)
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     https://www.difesa.it/Primo_Piano/Documents/2015/04_Aprile/LB_2015.pdf, p. 9.
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10   Taylor & Francis Online: Military Balance; Chapter Two: Comparative defence statistics;
     https://www.tandfonline.com/loi/tmib20 (downloaded: 27 March 2020)
11   Ibid.

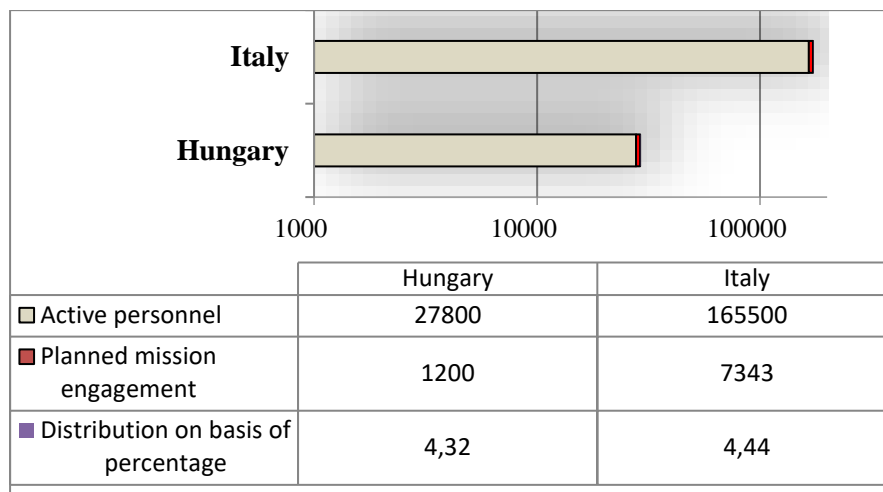| | Hungary | Italy |
|---|---|---|
| ☐ Active personnel | 27800 | 165500 |
| ■ Planned mission engagement | 1200 | 7343 |
| ■ Distribution on basis of percentage | 4,32 | 4,44 |

*Figure 1: The percentual share of the military personnel's participation in international missions and operations of Italy and Hungary*[12]

Italy and Hungary take part in various international organizations' missions and operations; therefore, this essay focuses on those (UN, NATO, EU, OSCE). These are to be discussed in the order of their creation. At the time being, Hungary takes part in eleven missions and operations in nine countries, on three continents with almost 900 soldiers. Out of these eleven missions, three belong to the United Nations. According to the open-source data of the Italian Ministry of Defence, the number of military personnel deployed to operations and missions is approximately 7,300 at a certain given time. (Difesa, n.d.) This excludes those who serve in national missions (*strade sicure*)[13]. Most notably, Italy is present on the contingent-level in Lebanon, Iraq, Afghanistan, Kosovo, Libya, Niger and Somalia. Italian presence can be seen in 24 countries worldwide.[14]

**Contribution of the Armed Forces of Italy in the missions and operations of the UN, NATO, EU, OSCE and others**

The Italian participation in missions and operations reached its peak in 2005, with well above than 10,000 deployed. Then, with a shallow decrease, reached its bottom rock in 2011-2012, merely 6,000 personnel deployed. Following that, the security environment started to change rapidly: Ukrainian crisis, ISIS, events of the Arab Spring, increased threat on cybersecurity. Responding to the events in the last decade, from 2012 the contribution started to be increasing once again. A noticeable

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[12]  Ibid.

[13]  Operazioni Militari;
https://www.difesa.it/OperazioniMilitari/Pagine/OperazioniMilitari.aspx (downloaded 18 May 2020)

[14]  MARRONE, Alessandro – NONES, Michele: Le forze italiane in missione all'estero: trend e rischi; https://www.iai.it/it/pubblicazioni/le-forze-italiane-missione-allestero-trend-e-rischi (downloaded 10 May 2020)

process started around 2011. The then approximately 190,000 strength of the Italian armed forces started to decrease. One, but not the only reason for this was the previous economic and monetary crisis. According to the White Paper, published in 2015, the goal was to create an armed force consisting of about 150,000 soldiers and 20,000 civilians by 2020. It also stated that a smaller, but more modern and better applicable army is to be created, that is ready to face the new type of security challenges. It is also underlined in the Strategy that this reduction may not result in any decline of the commitments towards international missions and operations.[15]

Italy contributes to five United Nations missions.[16] Italy participated first time in a mission of the United Nations, called UNMOGIP supervising the ceasefire between India and Pakistan. This is a long-lasting commitment of Italy, they still contribute to the UN-mission with 2 personnel. The United Nations' mission in Cyprus (UNFICYP) has been seeing Italian troops since 2005, as four gendarmes contribute to the control of a 180-kilometer-long buffer zone. The next mission by the timeline is the Lebanese mission. In the UNIFIL, three of Italy's services are to be found. In the mission Leonte, as Italians usually refer to it, Gen. Stefano Del Col leads the troops in which members of the Italian Army, Navy and Carabinieri (gendarmes) serve.[17] (UNIFIL, n.d.) In UNIFIL, out of the total 10,180, the number of Italian soldiers is 1,044, according to the UNIFIL's webpage.[18]

In the mission MINURSO stretching back to 1991, Italy contributes with two soldiers in order to promote the case of the referendum. The other UN mission in Mali not only aims the protection of the civilian population, but also guaranteeing human rights. Italy contributes to MINUSMA with seven personnel.[19]

Italy is one of the biggest contributors to the security of the euro-atlantic region. However, their defence expenditure does not exceed the provised 2% share of the annual GDP, they are the second after the United States regarding the number of military personnel in NATO's operations.[20] Also, the size and strength of Italy's economy is to be taken into consideration. Truly, they fall short of the 2% provision, nevertheless, they have the fifth biggest defence budget in the Alliance behind the United States, the United Kingdom, Germany and France. Also, the latter two are also

[15]  CAMPORINI, Vincenzo: Goals and shortcomings of Italy's Peace Support Operations; Instituto Affari Internazionali, 2019. https://www.iai.it/en/pubblicazioni/goals-and-shortcomings-italys-peace-operations (downloaded 16 May 2020)
[16]  Operazioni Internazionali in corso (ONU); https://www.difesa.it/OperazioniMilitari/op_intern_corso/Pagine/Operazioni_int.aspx (downloaded 17 May 2020)
[17]  UNIFIL Leadership; https://unifil.unmissions.org/mission-leadership (downloaded 16 May 2020)
[18]  UNIFIL Troop-contributing countries; https://unifil.unmissions.org/unifil-troop-contributing-countries (downloaded 16 May 2020)
[19]  VÁRADI, Gréta: Olaszország szerepvállalása nemzetközi missziókban és béketámogató műveletekben.; In: A hadtudomány és a 21. század tanulmánykötet; Nemzeti Közszolgálati Egyetem, Budapest, 2020. pp. 329-353. ISSN 2498-5228
[20]  TRENTA, Elisabetta: Italy's Defence Minister: Let's Redefine Burden-sharing; 2018. https://www.defencenews.com/outlook/2018/12/10/italysdefence-minister-lets-redefine-burden-sharing (downloaded 17 January 2019)

below the 2% threshold.[21] We also have to notice that one of Italy's external policy's three main pillars is their rapport with NATO and the United States, and therefore participation in these operations is a really important tool in the execution of their external policy.[22]

In the 2015 White Paper of Italy, the willingness is stated that Italy is ready to conduct peace support operations either with contributing to international organizations efforts, or independently.[23] The geographic sphere, in which Italy was ready and willing to articulate her national interests, is called enlarged Mediterraneum.[24] It is firstly described in a strategic concept, that was developed but not entering to force.[25] Good example for the operations conducted with international institutions or international coalitions is the formerly US-led, then NATO-commanded operations in Afghanistan, or the participation in missions and operations on the Western Balkans, where Italy is directly interested. Besides these, Italy conducts missions in the Mediterranean Sea.[26] On the Western Balkans, Italy's contribution to KFOR is remarkable. Behind the USA, Italy is the second biggest contributor in Kosovo, and also they regularly hold the position of the commander in a theatre that has a key importance in Italy's security. Out of the beforementioned 7,300 soldiers, about 600 Italians serve here. The biggest contribution from Italy to NATO operations is participating in the Resolute Support Mission. Here, there are about 800 Italian deployed. In Iraq, Kuwait and Turkey there are an additional 1,200 stationed in relation with the threat imposed by ISIS.[27]

Italy's importance and key role was beyond any doubt in the settlement of Kosovo's situation in 1999. Even though its participation remained restricted, her airfields, ports and infrastructure were key factors in the Alliance's success. The reason for this is that the stability of the Western Balkans is one of Italy's vital interests. Avoiding an uncontrollable influx of refugees was a huge factor in the decision-making process. Another factor with high importance was the geostrategic interests of Italy: so close to its land and sea borders, they can not stand the possibility of an escalated conflict. Besides these, of course, Italy has some important economic interests in the area as well. Strengthening its position within the Alliance was also to be taken into consideration.[28]

Italy provides the Multinational Specialised Unit in the structure of KFOR. This is a unit consisting only of Italian gendarmes. "*It provides COM KFOR with a capability for security operations including criminal intelligence, crowd and riots*

[21]  Defence Expenditure of NATO Countries (2013-2019); https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2019_11/20191129_pr-2019-123-en.pdf (downloaded 23 April 2020)

[22]  FORTE, Stefania – MARRONE, Alessandro: L'Italia e le missioni internazionali; https://www.iai.it/sites/default/files/iai1205.pdf, p. 32. (downloaded 27 April 2020)

[23]  Ministero della Difesa 2015. op. cit.

[24]  Mediterraneo allargato

[25]  Gruppo di Riflessione Strategica: Rapporto 2020 – Le scelte di politica estera. http://www.astrid-online.it/static/upload/protected/Rapp/Rapporto2020-SCELTE-POLITICA-ESTERA.pdf (downloaded 13 May 2020)

[26]  CAMPORINI op. cit.

[27]  The Military Balance; Chapter Four op. cit.

[28]  Ibid.

*control (CRC) as well as information gathering and assessment. The MSU can also provide advice training and support to local police forces on a wide range of policing issues if required, including: law enforcement, combating organized crime and terrorism, war crime investigation, crime prevention and public security.*"[29] The MSU is commanded now by Colonel Enio Simone.

The operations in Afghanistan are of higher intensity. It reached its peak strength in 2012, with a number of soldiers exceeding 130,000. NATO's biggest-ever operation cannot be considered a classic peacekeeping mission, as there were many armed encounters with insurgent groups, resulting in way higher number of casualties. These activities are called Counter-Insurgency – or COIN – operations. This resulted in pressure from the civilian society, mainly in the USA, sparking adverse effects on the operations. Italy has been contributing since the commence of the ISAF in 2002. The Italian contribution peaked in 2009, when more than 4,000 Italian soldiers were deployed, and had a regional command. ISAF was also commanded by an Italian general. On some extent, the participation in Afghanistan is the contrary of the one in Kosovo: in Kosovo there are clear Italian interests, while in Afghanistan Italy is not interested in the settlement directly. There are some important indirect interests though: proving their worthiness towards the Alliance and the USA, and avoiding the rise of terrorists groups per se, and as a cause of a possible migration crisis.

Besides the deployment of troops, Italy is the home of many of NATO's important commands and units in the Alliance's structure. For example, one of NATO's Joint Forces Command is in Naples. In the very same building, a young element of the command structure is the NSD-S (NATO Strategic Direction – South) Hub. There are plenty of important NATO assets dislocated also in Italy, e.g. at the Aviano airbase. As mentioned before, KFOR also regularly has an Italian commanders. Italy has been taking part in air policing missions. The goal of these is to safeguard those NATO-nations that have no effective air defence and/or do not possess any fighter aircrafts. This can be familiar to the Hungarians as well, as many times the two nations handed the tasks over to each other, or even conducted them together in the Baltics, in Slovenia or in Iceland.

During the operations in Afghanistan, Libya and the counter-ISIS operations it became obvious that Italy's approach is to refrain from the use of force. This attitude can be derived from history and ideology.[30] Due to slightly different causes, the same can be said about Hungary's contribution as well.

Italy is amongst the leading nations in the European Union's operations and crisis response missions. They make a remarkable contribution to the EU's Common Security and Defence Policy, which is a useful tool in the Union's comprehensive approach to face crises, with the troops and civilians on-scene. In addition, the High Representative of the European Union for Foreign Affairs and Security Policy was also an Italian, Federica Mogherini between 2014 and 2019.

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[29]  MSU; https://jfcnaples.nato.int/kfor/about-us/units/msu (downloaded 27 April 2020)
[30]  MARRONE, Alessandro – TESSARI, Paola – DE SIMONE, Carolina: Italian Interests and NATO: From Missions to Trenches? http://www.iai.it/sites/default/files/iai1412e.pdf (downloaded 18 April 2020)

For Italy, participation in the EU's missions and operations are vital for two main reasons. Firstly, even though they consider NATO as the main organization guaranteeing the region's security, regarding their Southern neighborhood; within the framework of the European Union they are able to have larger leverage in the decision-making process. Secondly, the multilateralism, the international rule of law, the civil-military cooperation all those elements which are shared values of Italy and the European Union, and are integral and organic parts of Italy's strategic culture, therefore they are committed to contribute to the missions and operations safeguarding these values.[31] One of Italy's biggest contribution to the European Union's efforts can be detected in the EU's first ever naval operation, which started in order to ease the turmoil caused by the piracy by Somalia's coasts. EUNAVFOR Somalia (Operation Atalanta) isn't the only contribution by Italy. In the same theatre, EUTM Somalia aims to train Somali security forces, and there is massive Italian presence in this training mission. In the beforementioned two engagements, there are approximately a combined 550 Italian soldiers.[32] This operation's headquarters is located in Rome.[33] Of course, there are many more civilians also contributing to the EU's different missions.[34] On top of these, Italy also contributes to the mission EUNAVFOR MED IRINI, which aims to oversee the embargoes issued on Libya. This mission being commenced in March this year, EUNAVFOR MED Sophia was concluded. The mission is being led by Rear Admiral Fabio Agostini.[35]

EU aims to counter piracy, and to control fishing activities along the shore of Somalia, and to promote the creation and consolidation of Somalia's public administration. To assist these tasks, the EU established the civilian mission named EUCAP Somalia, with three Italian soldiers. The other mission of the European Union in Africa is conducted in Mali. This is mainly a training mission, and EU's goal is also to provide logistical aid. Italy's contribution to the mission consists of twelve trainers and staff officers. In the EUCAP SAHEL Mali mission there are four more Italian soldiers serving. The goal of this mission is to advise public administration officers and non-military armed forces of Mali.

The last mission of EU in Africa is the EUCAP SAHEL Niger, where two Italian soldiers are involved in the creation of the new security strategy. Upon request of the Iraqi government, in 2017 the EU's mission for the Security Sector Reform has commenced with two Italian soldiers. Italy also participates in the Kosovo EULEX

31    MARRONE, Alessandro: Italy and the CSDP; The Common Security and Defence Policy: National Perspectives; Academia Press, Gent, 2015. pp. 47-49. ISBN 978 90 382 2524 1
32    TERCOVICH, Giulia: Peacekeeping Contributor Profile: Italy; 2017. http://www.providingforpeacekeeping.org/2017/04/13/peacekeeping-contributor-profile-italy-2-2017/ (downloaded 04 May 2020)
33    EUNAVFOR MED Operation Sophia; http://www.difesa.it/OperazioniMilitari/op_intern_corso/eunavfor_med/Pagine/default.aspx (downloaded 14 May 2020)
34    PIROZZI, Nicoletta – MUSI, Francesco: L'Europa civile: le missioni Ue el il contributo dell'Italia; 2019. https://www.affarinternazionali.it/2019/07/europa-civile-missioni-italia/ (downloaded 04 May 2020)
35    Operation EUNAVFOR MED IRINI; https://www.operationirini.eu/ (downloaded 07 May 2020)

civilian mission. Besides the high number of Italian carabinieri, not more than four soldiers serve here.[36]

The Organization for Security and Cooperation in Europe has its special kind of mission network. They are mainly active in the Balkans, the Caucasus, Central Asia, and the post-Soviet states.[37] During its missions, they are working according to Chapter VI. and VII. of the Charter of the United Nations. In the publication released by OSCE after its summit in Istanbul, in as early as 1999, the importance of peace support activities was underlined.[38] During its missions, they do not use force, therefore their toolset consists of means and ways that meet the definition of soft security.[39]

According to the data of the Italian Ministry of Foreign Affairs, Italy is one of the main contributors of OSCE's missions alongside the United Kingdom and France.[40] One of the missions of the OSCE is conducted in Serbia. The local authorities are assisted by Italians, who promote human rights. This mission is led by Ambassador Andrea Orizio. Furthermore, they are members of the working group created in order to mediate in the conflict arose about Nagorno-Karabakh.[41]

Italy held the presidency of OSCE in 2018. During their time, they underlined the importance of the migration in the Mediterranean area, the Ukrainian crisis and the longer lasting, frozen conflicts (Nagorno-Karabakh, Abkhazia, South Ossetia).[42]

In addition to international missions, it is important to mention that Italy is one of the most relevant country in the implementation of the security provisions between Egypt and Israel. Created for this purpose the MFO (Multinational Force and Observers) is an independent international peacekeeping organization in the Sinai Peninsula, established with the mission of guaranteeing compliance with the peace treaty (Camp David) between Egypt and Israel and facilitating military dialogue between the two countries. The organization is headquartered in Rome, from where they direct and coordinate the work of the multinational force and observers.[43] Italy has been supporting the maintenance of peace since 1982. They have provided the MFO's Coastal Patrol Unit (CPU). Their task is to monitor possible infringements at

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[36]  Ministero della Difesa: Operazioni militari; 2020. www.difesa.it/OperazioniMilitari (downloaded 19 May 2020)

[37]  Ministero degli Affari Esteri: Organizzazione per la Sicurezza e la Cooperazione in Europa. https://www.esteri.it/mae/en/politica_estera/osce (downloaded 18 May 2020)

[38]  VÁRADI op. cit.

[39]  GAZDAG, Ferenc – REMEK, Éva: A biztonsági tanulmányok alapjai; http://www.kiadvanyok.ludovika.hu/users/default/dialogcampus/ebooks/978-615-5845-88-8/pdf/web_PDF_EKM_Biztonsagi_tanulmanyok_alapjai.pdf (downloaded 19 May 2020)

[40]  Italy and the OSCE; https://www.esteri.it/mae/en/politica_estera/osce/l-italia-e-l-osce.html (downloaded 18 May 2020)

[41]  Ministero degli Affari Esteri op. cit.

[42]  Italy and the OSCE op. cit.

[43]  MFO: https://www.difesa.it/OperazioniMilitari/op_intern_corso/MFO/Pagine/default.aspx (downloaded: 10 December 2020)

sea. Navigation patrols are also provided by observers, thus ensuring freedom of navigation.[44]

### The Contribution of the Armed Forces of Hungary in the missions and operations of the UN, NATO, EU and OSCE

In her essay, Petra Szalai wrote that the first peacekeeping operation of Hungary started at the end of the 19th century in Cyprus. The same place, where the modern-age history of the Hungarian Defence Forces' in peace support operations started. Concluded in 2018, a Hungarian contingent contributed to the United Nations' efforts on the island sustaining ceasefire.[45] Despite having been withdrawn at the contingent-level, several Hungarian staff officers and some military police personnel are still deployed there.[46] According to the Hungarian Government's decision six military topographers has been deployed to Lebanon, the UNIFIL mission. By the time being, the Hungarian contribution is four topographers according to the data available on UNIFIL's website.[47]

It also has to be mentioned that in light of the Hungarian Government's Decree numbered 1344/2019. (VI.11), between 2019 and 2022, the overall Hungarian contribution the international missions and operations will be strengthened by a maximum of 260 military personnel in three missions and operations. Seven Hungarian soldiers serve in the United Nations' MINURSO mission continuously since 1999. Between 2002 and 2005 the mission was also commanded by a Hungarian Gen. György Száraz.[48]

The training for these missions' rotations are held by the Peace Support Training Centre of the Hungarian Defence Forces.[49]

According to the data of The Military Balance of 2020, the number of Hungarian soldiers deployed at a given time is slightly below 900. The abovementioned 260-personnel strengthening the contributions will be directed towards two NATO operations in which the Hungarian contribution are already strong. One is the operation Joint Enterprise conducted by KFOR, and the other is the Resolute Support

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[44] MFO: Military personnel by country. https://mfo.org/contingents?id=ITA (downloaded: 10 December 2020)

[45] Szalai, Petra: ENSZ, Békefenntartás, Magyar missziós szerepvállalás; 2016. https://docplayer.hu/1763203-Ensz-bekefenntartas-magyar-misszios-szerepvallalas.html (downloaded 20 May 2020)

[46] Faragó, Fanny: Hazatértek; https://honvedelem.hu/galeriak/hazatertek/ (downloaded 18 May 2020)

[47] UNIFIL Troop-contributing countries op. cit.

[48] Besenyő, János: Nyugat-Szahara és az ENSZ: A MINURSO létrehozásához vezető út; https://www.researchgate.net/publication/276280465_Nyugat-Szahara_es_az_ENSZ_a_MINURSO_letrehozasahoz_vezeto_ut (downloaded 17 May 2020)

[49] Magyar Honvédség Béketámogató Kiképző Központ: Kiképzési Kalendárium 2020. https://pstc.hu/rovatok/felkeszitesek/kalendarium/kikepzesi-kalendarium-2020/kikepzesi_kalendarium_2020.pdf (downloaded 18 May 2020)

Mission in Afghanistan. More than half of the Hungarian deployed are serving in these two operations, exceeding 500 combined.[50]

Hungary also have a battalion-level unit in KFOR, this is under the direct command of the commander of KFOR. The Kosovo Tactical Reserve Battalion is commanded by a Hungarian Lieutenant Colonel Mátyás Hodoniczki. *'KTRBN's capabilities includes a wide range of security operations, person designated with special status close security, property designated with special status security, road control, escorting columns, surveillance, reconnaissance, population aid and other infantry tasks. KTRBN is specifically trained in Crowd and Riot Control (CRC) Operations and provides CRC training to all KFOR units in particular for fire phobia.'*[51]

Besides the two beforementioned major NATO-operations, Hungary also supports the Inherent Resolve operation of the USA with approximately 170 troops. In the EUFOR mission in Bosnia (Althea), there are also 164 Hungarians serving, and there are Hungarian soldiers in the MINUSCA, UNIFIL, EUTM Mali and Somalia and MINURSO missions as well, and in the OSCE's missions in Ukraine and Georgia.[52]

Hungary's contribution is diverse, from providing some staff officers to the company in Bosnia to providing a battalion in Kosovo. In total, three quarters of Hungary's deployed troops are in NATO-operations or US-led coalitions. In the Resolute Support Mission we also find Italian and Hungarian soldiers working together. The main purpose of this mission is to aid the training of the armed forces of Afghanistan. The most significant common contribution is shown in the Northern and Southwestern Regional Commands. There are Hungarians serving in the Train Advise Assist Command, which aims to provide sufficient training for the airmen of Afghanistan.[53]

Even though Hungary contributes to NATO's missions and operations, the country is also devoted to protecting her national interests within the EU's Common Security and Defence Policy. Close second behind the contribution to KFOR, Hungary has also deployed soldiers to the EU's Western Balkans operation. Troops were present even before establishing EUFOR Althea in Bosnia and Herzegovina, as the formerly NATO-led SFOR operation was amongst Hungary's first ever modern-age deployments. The two nations (Hungary, Italy) deploy to these two Western Balkans operations 500 personnel each. The Hungarian contribution to the Althea is a mechanized infantry company, which is located in camp Butmir, Sarajevo. This company is a subordinate of a multinational battalion, in which the other two companies are provided by Austria and Turkey and presently commanded by the Austrian Lieutenant Colonel Alfred Steingress.[54] Hungarian officers and generals carry several important roles here; the most decorated is the Chief of Staff, as on the

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[50] The Military Balance 2020. Chapter Four.
[51] KTRBN; https://jfcnaples.nato.int/kfor/about-us/units/ktm (downloaded 27 April 2020)
[52] Ibid.
[53] RS Commands; https://rs.nato.int/rs-commands.aspx (downloaded 29 May 2020)
[54] Multinational Battalion (MNBN); http://www.euforbih.org/eufor/index.php/eufor-elements/multinational-battalion (downloaded 09 May 2020)

15th of May, 2020, Brig. Gen. Ernő Baráth took over this role from Brig. Gen. László Szabó.[55]

Besides its classic everyday tasks, the abovementioned high mobility manoeuvre company; conducts exercises and contributes to the training of the armed forces of Bosnia and Herzegovina. The connection and interoperability between the European Union's and NATO's operation in the region is provided, they can share their tasks upon need. This is practiced on a yearly basis during the Quick Response Exercise.[56]

Hungary's most robust contribution to EU's missions and operations is in the Althea operation in Bosnia-Herzegovina. Hungary is also deploying soldiers to the EU's two training missions in Africa. The training of armed forces in Mali and Somalia is assisted by seven and four Hungarian soldiers respectively. Till 2010, three Hungarian NCOs served in the operations headquarters, NATO's Northwood command centre.[57]

Hungary is also the host of a NATO Force Integration Unit (NFIU), and the Central-European Multinational Division Command (MNDC), that will shortly become fully operational. As an important asset of NATO, and a good example for smart defence projects, Hungary is also the home of the SAC-Programme (Strategic Airlift Capability), which is conducted by the Heavy Airlift Wing (HAW).[58]

Hungary is also devoted to OSCE's activities. In 2017, during Austrian presidency, Ambassador György Varga was appointed as the leader of the observer mission for the Russian-Ukrainian conflict. The border was being monitored by experts of thirteen OSCE-member states. Besides Varga, three other Hungarian experts were provided for the mission.[59]

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[55] PERRY, Carl: Ceremony at Camp Butmir for the Transfer of Authority of the EUFOR Chief of Staff; 2020. http://www.euforbih.org/eufor/index.php/eufor-news/latest-news/2727-ceremony-at-camp-butmir-for-the-transfer-of-authority-of-the-eufor-chief-of-staff (downloaded 19 May 2020)

[56] LECKEY, Timothy: EUFOR Exercise Quick Response 2019 Opening Ceremony; http://www.euforbih.org/eufor/index.php/qr19/2598-qr-eufor-exercise-quick-response-2019-opening-ceremony (downloaded 19 May 2020)

[57] BESENYŐ, János: Hungarian Participation in the EU-Led African Military Operations; https://folyoiratok.uni-nke.hu/document/nkeszolgaltato-uni-nke-hu/Hungarian-Participation-in-the-EU-Led_AARMS_2018_01.pdf (downloaded 14 May 2020)

[58] ABBONDANZA, Gabriele: The West's Policeman? Assessing Italy's Status in Global Peacekepping; In: The International Spectator; Istituto Affari Internazionali, Rome, 2020. 55. vol. no. 2. pp. 127-141. ISSN 1751-9721

[59] Külgazdasági és Külügyminisztérium: Magyar diplomata az EBESZ orosz-ukrán határmegfigyelő missziója élén; https://www.kormany.hu/hu/kulgazdasagi-es-kulugyminiszterium/biztonsagpolitikai-es-nemzetkozi-egyuttmukodesert-felelos-allamtitkar/hirek/magyar-diplomata-az-ebesz-orosz-ukran-hatarmegfigyelo-misszioja-elen (downloaded 19 May 2020)

**Conclusion**

Evaluating the participation of Italy's and Hungary's armed forces in the international missions and operations, it can be determined that both of the countries, compared to their own possibilities, are reasonable contributors to the security of the transatlantic area. As we saw, these two countries are also members of the most important international organizations of security and cooperation. A shared priority is the security of the Western Balkans, in this theatre, the combined contribution in the efforts of different international institutions exceeds 1,000 troops either in military operations or civilian missions.

In the case of Italy and Hungary, the presence and scale of contribution in international operations follow same principles. Taking their strength into consideration, they contribute to NATO's operations mainly in the Western Balkans, and to the operations led by the USA with significant force. Italy is the second behind the USA, Hungary follows as third as the biggest troop contributing nation in Kosovo. The two countries combined provide one third of the whole personnel of KFOR. Considering troop contributions, Hungary is quite underrepresented, as since the beginning of the mission (1999), KFOR saw mere two Hungarian generals. János Csombók, and the current commander of the Hungarian Defence Forces, Ferenc Korom were previously deputy commanders of KFOR.

The Western Balkans has key importance in the two countries' geostrategic thinking. They are related by thousands of bonds of historic-geographic interests and, of course, economic interests. The two countries' opportunities may differ, but they contribute massively to the regions' operations. Operations conducted by the EU and NATO (Althea and Joint Enterprise) are strongly relying to these two countries' contributions. The tendencies of the last years' showed that Italy is not reducing their contribution to the missions and operations, and Hungary is even strengthening their presence.

It is also common in the two countries that they consider NATO as their most important partner guaranteeing military security, as the vast majority of their contribution is conducted in NATO's operations. However, Italy is committed to the coalitions of the United States due to their history and military capabilities, this kind of commitment can be also seen in Hungary's activities. This was not in the focus of this essay, but Italy, contrary to Hungary, is also capable of establishing and carrying out operations and missions on their own.

There is a slight difference between the two countries' participation in the European Union's missions and operations. On one hand, in case of Hungary, the Althea is the only operation in which Hungary contributes to the mission with unit-level force. On the other hand, Italy is way more interested in the EU's naval operations. Besides the obvious differences between the countries' geography, for Italy the Mediterranean is a vital area of interest, as this this is the source, or at least the transfer fluid of the majority of threats imposed on Italy.

The Hungarian and Italian armed forces are also being transformed. In Hungary, there is an ongoing modernization programme, and in Italy there is a reduction of the number of the active-duty personnel, whilst approaching to adapt to the new security

threats of the 21st century. As in Hungary this modernization also means the strengthening of the contribution to the international missions and operations, Italy's goal is to maintain their level of ambition, while reducing the military personnel. Therefore, the share of military personnel deployed will get higher in both countries. Of course, this can change because of the effects of COVID-19 pandemic on economy and society.

To sum up, we can say that the policy of presenzialismo is still a guideline in Italy's external and defence policy, as their participation in their area of interest, and in NATO-operations remains remarkable in spite of the reduction of personnel. In many cases, Italy is among the top three contributors of the international missions and operations. We can say that compared to their power, Hungary's contribution is also very dominant in international organizations' activities. Mostly in those areas, where Italy is also interested; therefore, the expression 'presenzialismo' can also be applied to Hungary's policy. As the defence expenditures, compared to their respective GDPs are similar in the case of the two countries, the participation in missions and operations are almost identical. In case of Italy, this is way more noticeable, as this results in way more soldiers, but proportionately this is almost the same share of their armed forces as of Hungary's.

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REGINA SURÁNYI

**RELATIONS BETWEEN FINLAND AND THE RUSSIAN FEDERATION**
*SECURITY AND DEFENCE RELATIONS BETWEEN FINLAND AND RUSSIA*

*Abstract*

For Finland, the biggest security and defense policy challenge has always been Russia, both in the past and the present. For Finland as a small state, the Russian Federation, as a regional superpower, poses a continuous and long-term challenges. By presenting and analyzing Finland's security and defense policy documents, I show how relations between Finland and the Russian Federation have changed over the years, and how this relationship has influenced the development of Finnish security and defense policy to the present day. Russia's foreign policy, social development and the transformation of its armed forces are affecting Finland in every way, that's why Finland's ever-changing security and defense policy is mainly due to its relationship with its eastern neighbor.

*Keywords*: Finland, Russian Federation, security, defence policy, relations

For Finland, the biggest security and defense policy challenge has always been Russia, both in the past and the present. For Finland as a small state, the Russian Federation, as a regional superpower, poses a continuous and long-term challenge in many areas.

From the 1990s onwards, bilateral agreements between the two countries were constantly being reached, not only in economic and financial spheres, but also in political and military agreements. After the end of the Cold War, Finland has continued to monitor Russia's relations with international organizations, because these – mainly negative changes – posed security challenges for Finland. Russia is also constantly appearing in the Finnish security and defense policy documents as a security challenge.

In order to have an overview of the security and defense policy relations between the two countries, we need to get an idea of the historical past of Finland and Russia. Under the secret clause of the Molotov-Ribbentrop Pact of August 23, 1939, Germany and the Soviet Union decided the division of their spheres of interest, which was extremely unexpected for international politics. Under the treaty, the Soviet Union formed a right to the old Russian territories that stretched from Finland to Bessarabia through the Baltic states.

On September 18, 1939, after the Soviet navy invaded Estonia, Latvia and Lithuania, and took control of the sea, the three Baltic states were forced to sign a

"Mutual Assistance Treaty"[1] with the Soviet Union. The Baltic states successively lost their independence and became part of the Soviet Union.

After the annexation of the Baltic States, another strategically important area, Finland, would have followed. For the Soviet Union, the Finnish territories played a key role in defending Leningrad. The first Finnish-Soviet political meeting took place on October 5, 1939, where Stalin proposed a change of territory to the Finnish delegation led by Juho Kusti Paasikivi[2]. According to the exchange, the USSR demanded a part of the Karelian Strait, important for the protection of Leningrad, the Petsamo ice-free harbor, and wanted to rent the peninsula at the entrance to the Gulf of Finland in exchange for North Karelia. Paasikivi, following instructions from the Finnish government, declined the offer. After the Finnish delegation completely refused the propose of a change of territory, the Soviet Union was forced to resort to other means.

On November 26, 1939, along with Mainila on the Karelian border, some Red Army soldiers mounted an incident against their own troops in Mainila on the Karelian border, which of course was immediately recognized by Moscow as a Finnish aggression. With this attack, the Soviet Union claimed that Finland had violated the Finnish-Soviet non-aggression treaty of 1932, and was immediately terminated by the Soviet Union. Simultaneously with the termination of the treaty, Stalin ordered an attack on Finland and an immediate air strike against Helsinki. After all this, on November 30, 1939, the Finnish capital was attacked by air and the Finnish-Soviet Winter War (Talvisota in Finnish) began.[3] The attack was launched primarily on part of the Karelian Straits, and on the ice-free port of Petsamo, which were strategically important for the Soviet Union. As the Finnish troops were far behind the Soviet troops in terms of manpower and equipment, the Soviet Union hoped for a quick and easy victory, but the Soviet plan for a "Blitzkrieg" failed. The main reason for this is that the Finns, by General Mannerheim, have built a strong and almost impenetrable defensive line[4] in the Karelian Strait to contain the Soviets. Not only did the Soviet attacks stop along the Mannerheim Line, but also in the northern areas, as the Finns, dressed in white and on skis, caused great losses to Soviet troops using guerrilla combat techniques. The fighting events between 1939 and 1940 also attracted international attention, as a small state with significantly less force than the Soviet Union was able to stop and repel the aggressive offensive on certain sections.

Despite the fact that the Finnish troops stood up well in the fighting, they suffered considerable losses, and on 3rd of December 1939 the Finnish Foreign Affairs Minister sought assistance from the League of Nations. The Alliance classified the Soviet Union as an aggressor and, with reference to Article 16[5] of the Statute,

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[1] On September 28, 1939, the Soviet Union signed a Mutual Assistance Treaty with Estonia, on October 5 with Latvia, and then on October 11, Lithuania.
[2] Juho Kusti Paasikivi: Prime Minister of Finland between 1944-46 and 1946-56
[3] JUTIKKALA, Eino– PIRINEN, Kauno: Finnország történelme; Kairosz Kiadó, Budapest, 2002. pp. 330-336.
[4] The 135 km wide and 15–60 km deep Finnish fortification was built between 1927 and 1939 on the Karelian Strait between the Gulf of Finland and Lake Ladoga.
[5] The League of Nations; Old Colony Trust Company, Boston, 1919. https://web.archive.org/web/20081023102846/http://www.rmc.ca/academic/poli-econ/dorn/UNcharter_e.html (downloaded 02 March 2020)

excluded it from the League of Nations and called on member states to provide assistance. Although the struggle of the Finns aroused sympathy and appreciation throughout the world, but few of them came to their aid,[6] almost all the great powers remained idle. Sweden, Norway and Denmark adopted a declaration of neutrality on the Finnish war on 25 February 1939, so that Finland could not count on support from the Scandinavian countries. On February 12 1940, Soviet troops broke through the Mannerheim Line and occupied the city of Viipuri, and with the economic exhaustion of the country, Finland lost the war. However, the Soviet Union failed to achieve its goal, as it was forced to make peace with the country due to the protracted war, thus allowing Finland to maintain its independence.

The Peace Treaty ending the war was signed on 12 March 1940 in Moscow. Under the Peace Treaty, Finland was forced to give up about 10% of its territory.[7] Finland was forced to hand over part of the Strait of Karelia together with the city of Viipuri, the northern and western cities of Lake Ladoga, part of the Gulf of Finland and the provinces of Kuusamo and Salla in the north to the Soviet Union. In addition to the annexed areas, the Peace Treaty obliged Finland to rent out the Hanko harbor, which protects the Gulf of Finland entrance, to the Soviet Union for 30 years for 8 million markkas[8] per year. Finland's strategic position has been significantly weakened by the annexation of its territories.
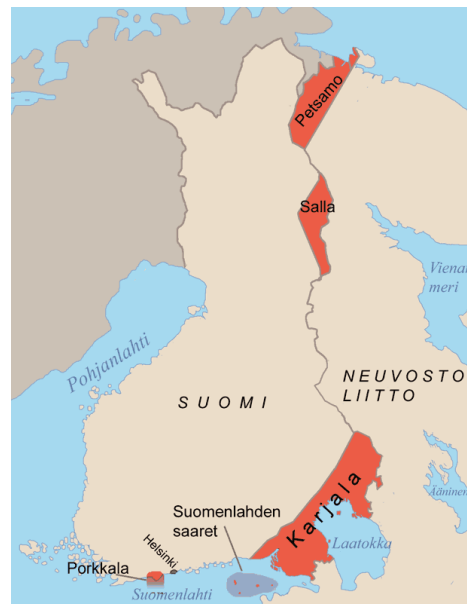


*Figure 1: Areas attached under the Moscow Peace Treaty*[9]

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[6]  The United States of America contributed 10 million dollars and some of the European countries (included Hungary) have troops to help Finland.

[7]  JUTIKKALA – PIRINEN op. cit. pp. 330-336.

[8]  The Finnish markka was the currency of Finland from 1860 until 2002.

[9]  Source: https://fi.wikipedia.org/wiki/Moskovan_v%C3%A4lirauha#/media/Tiedosto:Pariisin_rauha.png (downloaded 02 March 2020)

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Finland did not settle for the loss of its territory, so the country initiated negotiations with the German forces. As a result of the negotiations, Finland provided a free route through its territory to the German forces for an attack on the Soviet Union. At the same time, Finland did not join the attacks launched on 22 June 1941, and even made a declaration of neutrality on 23 June 1941. However, this changed when a Soviet air strike hit the country on June 25, so the Finnish government declared a state of war between Finland and the Soviet Union. This broke out the Finnish-Soviet Continuing War (in Finnish: Jatkosota), which the Finns were pursuing to regain their annexed territories. As the country entered World War II alongside fascist Germany, it lost international support. At the end of the fighting, the two countries signed a Peace Treaty (Moscow Peace Treaty) in 1944, under which territorial disputes seemed to be resolved. The Peace Treaty did not contain any new elements, essentially repeating the main points of the Moscow Peace Treaty of 12 March 1940. As well as the fact that within two and a half months of the signing of the treaty, Finland will reduce its troops to a peaceful level and German troops stationed there will leave the country.

The year 1944 proved to be a decisive year in Finnish history not only for domestic politics but also for foreign policy. This year, for the first time, the country's international position and foreign policy were set. The Finnish leadership has stated that the Soviet Union has become a great power, and that is why its presence has become a major factor in international politics and its ability to assert its interests must be reckoned with in the future. From the Finnish politics' point of view, the aim was to preserve the established sovereignty and social system for the future.[10]

In addition to the above-mentioned objectives, the most important strategic guideline of the Finns was the system of relations with the Soviet Union. Finland's goal was to shape the relationship between the two countries so that the Soviet Union could be sure that it would not have to expect an attack from or through Finland, so the country wanted to remain neutral in all armed conflicts. However, Finnish neutrality was only possible if the Finnish-Soviet relations were not only settled, but they were on a long-term basis.[11] As a result, Finland's relationship with its eastern neighbor become the most important element of the Finnish security and defense policy.

### Relations between Finland and Russia in strategic documents

In Finland's relations with Russia, it is important to highlight the Agreement of Friendship, Cooperation, and Mutual Assistance of 1948 and the subsequent Friendship, Cooperation and Mutual Assistance Agreement of 20 January 1992 in which there wasn't a compulsory military co-operation anymore, but the highlight were on the economic and financial cooperation.

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[10] RAVASZ, István: Finnország függetlenségi harca 1917–1945. Magyar önkéntesek Finnországban; https://docplayer.hu/1786187-Finnorszag-fuggetlensegi-harca-1917-1945-magyar-onkentesek-finnorszagban.html (downloaded 14 March 2020)

[11] SZABÓ, János: Fegyveres semlegesség; Zrínyi Kiadó, Budapest, 1985. p. 90.

Bilateral treaties between the two countries have been steadily developing since the 1990s, covering not only economic and financial cooperation, but also numerous political and military areas. These relations, as well as Russia's relations with the international community, are of great importance to Finland, since changes - mainly negative - in these relations have posed and pose in these days also a major security and defense policy challenge for Finland.

The 1995 Security and Defense Policy document on relations with Russia reads: *"Russia's development has an important impact on Finland's security, and for this reason we are committed to supporting Russia's democratic reform through international cooperation"[12]*. As the focus of Finnish defense policy is on the stability of neighboring areas (the Baltic States, Russia, the European polar regions and the wider Baltic Sea and Barents region), Finland is committed to supporting these issues as well as a political policy. As the focus of Finnish defense policy is on the stability of neighboring areas (the Baltic States, Russia, the Arctic and, more broadly, the Baltic Sea and the Barents region), Finland is committed to support the continued democratization of these countries appearance.

The development of Finnish security and defense policy is accompanied by the development of relations with the Russian Federation. One of the key issues in examining these relations is the situation of the Finnish-Russian border. In the European Union, Finland has the longest common border section with Russia, which raises several security issues that affect not only Finland but the European Union as a whole. One of the key issue is that with Finland's accession to the European Union in 1995, the country become the external border of the European Union. Finland's entry into the Schengen area has changed the conditions for crossing the border from the Russian side.

The importance of the extremely long common border section is also illustrated by the fact that several cross-border cooperation has been established between Finland and the Russian Federation. The first such cooperation agreement was first signed by the two countries in 1992. The agreement between Finland and Russia subsequently served as a model for cross-border developments in the European Union.[13] Between 1992 and 2012, the two countries carried out almost two thousand and five hundred projects, mainly in the Northwest region of Russia, including the Republic of Karelia, Murmansk region and Leningrad region. At that time, most of the money was spent on environmental protection and development of economic cooperation, but in addition they spent a lot of money on healthcare, agriculture and forestry, and also nuclear safety. In my opinion, thanks to the successful cross-border cooperation, the relationship between the two countries has developed positively and Finland is also acting as a liaison between the European Union and Russia in this area, thus expressing its diplomatic power.

From a military point of view, the proximity of St. Petersburg, where, according to Russian military reform, the North and Baltic fleets merge under a single

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[12]   Finnish security and defence policy; 1995.
       https://www.files.ethz.ch/isn/47584/Finnish_Security_European.pdf (downloaded 15 February 2020)
[13]   MÁRTON, Andrea: Finnország biztonság- és védelempolitikájának változása a hidegháború végétől napjainkig; PhD-értekezés, Budapest, 2013. p.112

headquarters, is a major issue. It is also important to note that Russia has deployed ballistic missiles in Kaliningrad in response to US missile deployment. These missiles completely undermine the security of the region, as the missiles are a major threat not only to the Baltic States but also to Finland.

The 2012 strategy states that the Russian Federation will continue to be the largest economic partner for Finland, and also that relations between the two countries go well beyond mere economic cooperation. These broad contacts include active political dialogue, ongoing cooperation between authorities and also networking at citizen level.

The strategy describes its relations with the Russian Federation as follows: "*Russia's foreign policy, social development and the transformation of its armed forces are affecting Finland in every way. It is in Finland's interest that Russia is increasingly committed to participating in European development, international cooperation and the global economy as well. Finland also gives priority support to the cooperation between the European Union and the Russian Federation in the field of foreign and security policy.*"[14] From this strategy, it is clear that from the point of view of Finland, Russia's internal stability, economic power, development and its military modernization programs are factors that fundamentally influence Finland's security environment and the development of the country's security and defense policy. As the economic activities of the Russian Federation are largely located in the western part of the country and most of the population is located there, the country pays special attention to these strategically important areas. These western areas also include the western part of the Russian Army, which was primarily designed to protect St. Petersburg and the strategically important Kola Peninsula. There are, therefore, significant military forces in the immediate vicinity of Finland, which require serious attention from the country. Finland sees positively the development of Russia, but nevertheless strives to involve its neighbor in as much international cooperation as possible, thus guaranteeing the stability of the region as well as its own.

The 2016 Government Report on Foreign and Security Policy clearly states that the international security environment has changed. This change, which is largely due to the military activity of the Russian Federation, calls into question the European security system, including Finland. The document says the following about Russia's activities: "*Russia annexed Crimea and at the same time triggered a crisis in Ukraine… Russia has increased its military footprint and activity in recent years…*"[15]

The actions of the Russian Federation have increased tension in the Baltic Sea region as well as in the Arctic. Russia is using a wide range of military and non-military assets to achieve its goals, which countries in the affected areas, including Finland, are trying to defend. This increasing security challenge also affects Finland directly in the region, so the country's security and defense policy has also changed. The document does not exclude the possibility of aggression or attack from Russia,

[14] Finnish security and defence policy 2012; 2012. https://www.bbn.gov.pl/ftp/dok/07/FIN_Finnish_Security_Defence_Policy_2012_Government_Report.pdf (downloaded 23 February 2020)
[15] Government Report on Finnish Foreign and Security Policy 2016; https://valtioneuvosto.fi/documents/10616/1986338/VNKJ092016+en.pdf/b33c3703-29f4-4cce-a910-b05e32b676b9 (downloaded 01 March 2020)

contrary to the strategies published in previous years. Finland is working to ease relations with its eastern neighbor and to act as a mediator between the Russian Federation and the European Union in order to ease the tension. Finland emphasizes that the isolation of Russia is of no benefit to anyone, so that's why Finland is seeking to promote cooperation and maintain dialogue between the international community and Russia.

As a result of the changed security of the Baltic Sea region, the crisis in Ukraine and military practices in the western part of Russia, Finland's relationship with NATO is becoming closer, as the country sees its security primarily in cooperation with NATO. However, for Finland, a possible NATO accession would fundamentally affect the security environment of the Baltic Sea, so this step requires serious consideration.

The Finnish Government's Defense Report, from 2017, continues to address the changed security environment and the renewal of the Finnish army. The document defines in 7 points the factors that influence the security of the country:[16]
1. The military crisis warning period has been shortened and the threshold for violence has been lowered. At the same time, the vulnerability of society continued to grow.
2. The intensity of military activities in the Baltic Sea region has significantly increased.
3. A possible conflict in the Baltic Sea region would have a significant impact on Finland's security.
4. It is questionable whether in the event of a conflict, shipping and air routes in the Baltic Sea will remain available to Finland. Blocking the country's maritime routes would place a heavy burden on society as a whole.
5. The use or threat of military force against Finland cannot be excluded.
6. The nature of the war is constantly changing, so in the event of a conflict, the range of instruments used against Finland becomes very wide, both in terms of military and non-military means.
7. Finnish forces must be capable of carrying out land, sea, air and cyber operations. The operational environment demands that Finland needs, among other things, intelligence capabilities, long-range weapon defense and cyber-attack protection.

It is clear from the above that the document is based on a threat from Russia. Finland is monitoring the activities of the Russian Federation in the region and it's also preparing for a possible attack. Of these, points the 5th is the most important, since, contrary to what has been said so far, the document states that a military offensive against Finland cannot be ruled out in the light of events in recent years. That is why the country is trying to modernize its armed forces. Finland's defense continues to be based on the principle of collective defense.

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[16]  Finnish Government Defense Report; 2017.
https://www.defmin.fi/files/3683/J05_2017_VN_puolustusselonteko_Su_PLM.pdf
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### Relations between Finland and Russia in the Arctic

When examining the relations between Finland and Russia, we cannot exclude the Arctic, as I believe that this region plays a decisive role in the politics of both countries. Important natural gas and oil reserves, shipping routes, fishing rights for fish-rich areas and, last but not least, military potential. In this region, particular attention should be paid to the Russian Federation, which has the longest continental coastline (as shown in the map below), and the country is the most active player in the area. In contrast, Finland has no maritime or coastal areas in the Arctic, but has areas beyond the Arctic Circle.
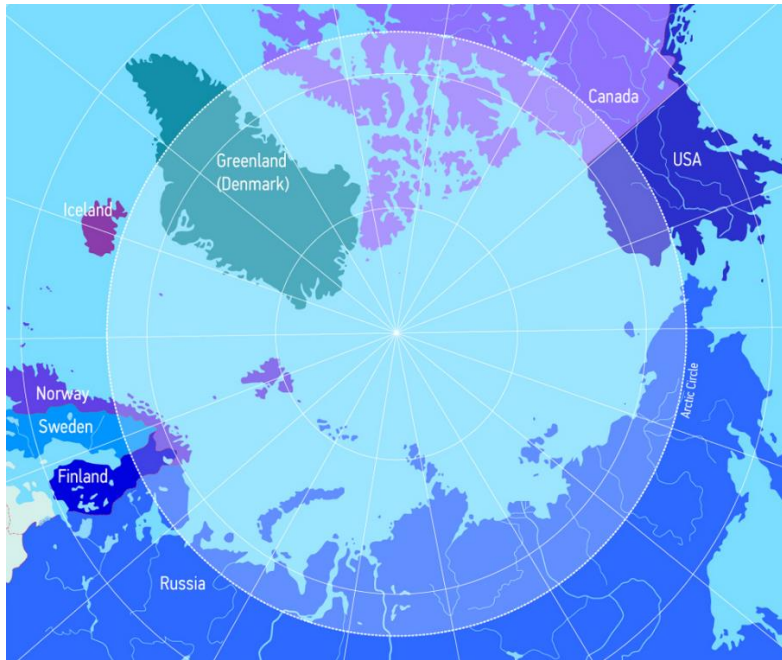


*Figure 2: The Arctic Region*[17]

Examining the military aspects, it can be stated that the area is very important. Already during the Cold War, several military bases have been established in the area, the most important and most powerful military base being the North Fleet in the Kola Peninsula. This fleet poses a challenge not only to Finland, but to all states interested in the Arctic, as the fleet represents a larger force than the troops stationed in the region by all the other the countries of the region, so Russia is clearly the dominant military force in the region. The main tasks of the North Fleet include nuclear deterrence in the North Sea area, protection of Russia's interests in the northern areas, and protection of the country's shipping and economic routes.

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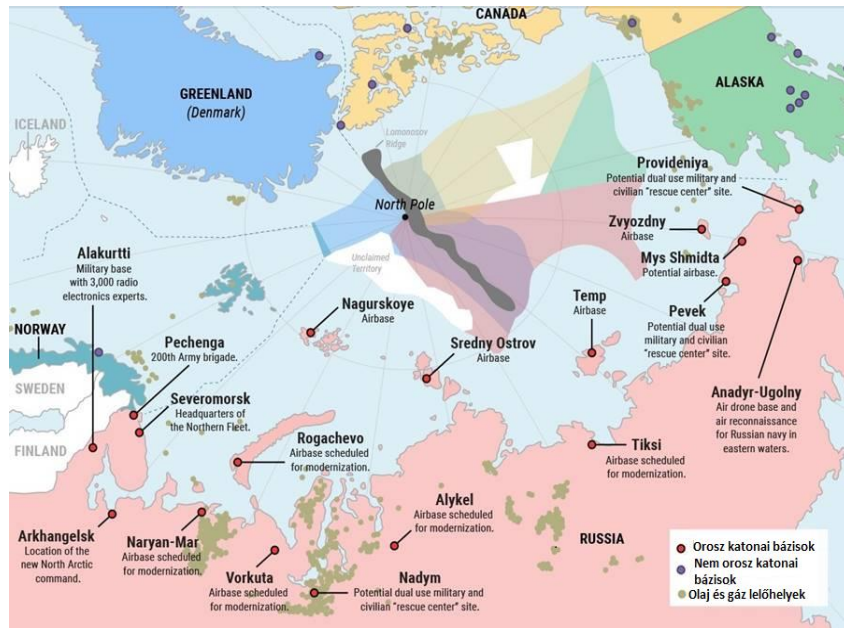[17]  Source: https://arctic.ru/geographics/(downloaded 04 March 2020)

*Figure 3: Military bases of the Russian Federation in the Arctic Circle*

The figure above illustrates the dominant presence of the Russian Federation in the Arctic. Russia is clearly demonstrating its military strength in the Arctic, which it is also shown by upgrading its former ports and military facilities in the Arctic. For Finland, this fortress demonstration is definitely decisive as there are several Russian military bases close to its borders.

The Northern Fleet represents a significant military force in the region. The fleet includes, among other things, thirty submarines, including eight strategic nuclear-powered ballistic missile carrier and twenty-two tactical offensive submarines, two battle cruisers (one of which is under repair), six destroyers and one aircraft carrier.[18]

For Finland, Russia's growing ability to assert its interests is a constant challenge. Finland seeks to mitigate this security policy challenge through economic and political relations with the Russian Federation. Although Finland has no sea access to the Arctic waters, the Arctic Strategy published in 2013 already states that Finland wants to be an active player in Arctic policy. Therefore, the country focuses on improving transport, developing communication and logistics links, strengthening environmental cooperation, protecting the local population and maintaining stability in the region.[19]

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[18] International Institute for Strategic Studies (IISS): The Military Balance 2017; https://www.iiss.org/publications/the-military-balance/the-military-balance-2017, p. 200. (downloaded 01 March 2020)

[19] Finland's Arctic Strategy; 2013. http://vnk.fi/documents/10616/334509/Arktinen+strategia+2013+en.pdf/6b6fb723-40ec-4c17-b286-5b5910fbecf4 (downloaded 16 March 2020)

Although Finland has no direct access to the Arctic, the country is striving to become a major player in the region through cooperation. The Finns are trying to cooperate with the strongest power in the area, the Russian Federation, in as many areas as possible. A prominent example of this cooperation is the Finnish Government's 2009 Action Plan[20] on the Russian Federation, in which the Finnish government gives priority to the Arctic and, in particular, cooperation with Russia. Former Foreign Minister of Finland Erkki Tuomioja said about Finnish-Russian relations in the Arctic as follows: *"Our Arctic Partnership gives us the opportunity to identify common interests, build relationships and deliver concrete results in different areas…"[21]* Of course, it is not only in Finland's interest to maintain this relationship, since Russia also benefits from these cooperation. While for Finland Russia is the gateway to the Arctic, the Russian government uses its relations with Finland to the European Union to assert its Arctic interests.

### Relations between Finland and Russia in the Barents-Euro-Arctic region.

The Barents-Euro-Arctic region, Norway, Sweden, Finland, Russia, Denmark, Iceland were established in 1993 by signing the Kirkenes Convention. The main objectives of the cooperation are to promote the social, cultural and economic development of the area and to support indigenous peoples, education, environmental protection and infrastructure development in the area.[22] The Barents-Euro-Arctic region is outstanding and unique in Europe as it is the largest cooperation between the regions. For Finland, this cooperation is an important point in foreign policy, as it provides another forum for relations between Finland and Russia.

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[20] Finnish Government Action Plan on Russia; 2009.
http://formin.finland.fi/public/download.aspx?ID=42139&GUID={D25E8E72-D19A-4467-B013-E05AE64A70EC} (downloaded 29 February 2020)

[21] Speech by Erkki Tuomija, Minister of Foreign Affairs
http://formin.finland.fi/public/default.aspx?contentid=250801&nodeid=15145&contentlan=1&culture=fi-FI (downloaded 02 March 2020)

[22] The Barents Cooperation; https://www.barentscooperation.org/en/About (downloaded 25 March 2020)

***Figure 4: Extension of the Barents-Euro-Arctic region***[23]

Cooperation is also of great importance for the Russian Federation, as the total area of the region is 1.75 million km$^2$, of which 71% is located in Russia.[24] Furthermore, for Russia, this cooperation will be a link with the European Union and the Arctic Council. Finland and Russia have participated in several joint projects as part of the cooperation. In order to facilitate trade between them, Finland has contributed to the modernization of several border posts, thus speeding up and facilitating the border crossing process, which has resulted in several cross-border business relations between the two countries. Of course, besides economic relations, environmental protection and cultural cooperation also appear in the relations between the two countries.

The Barents-Euro-Arctic region is increasingly becoming one of Europe's strategic regions. Global warming is opening up natural resources and opening new transport routes that have so far been constantly under ice. These new opportunities are changing the global map of resource use and transportation. In my opinion, the area will receive increasing attention in international politics, as the above-mentioned reasons may affect the international economy and the opening of shipping lanes will open the way to international waters.

### *Summary*

During the 20th century, the concepts of international politics and security were constantly changing. Finland has faced unprecedented challenges that have greatly influenced its policy development. In this ever-changing world, the role of security is greatly appreciated by all countries. Finland has to adjust its foreign and security policy to these changes.

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23   Ibid.
24   Ibid.

I have tried to briefly review the history of the country's military non-engagement and the changes in its policy of neutrality over the years. Finland's policy of neutrality, during the Cold War period, allowed the country to establish economic relations with both political camps and to engage in international cooperation, thereby gaining valuable experience. However, with the accession to the European Union, the country was forced to change its policy of neutrality. This change is well illustrated by the country's security and defense policy documents from 1995 to the present.

I also briefly outlined Finland's Arctic policy and why this region plays an important role in the country's foreign policy, also touched on Finland's Arctic policy and how it can maintain good cooperation with Russia and the surrounding countries in this area. Moreover, I tried to highlight the importance of the Arctic for Finland in the context of Russian relations.

I tried to present the relations between Finland and the Russian Federation in economic, political, cultural and defense relations and also highlight that how these relations have an impact of Finland's foreign and security policy decisions. Relations between the two countries significantly determine Finland's political decisions and its role in international politics.

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ATTILA MÁTÉ KOVÁCS

**HOW TO CONTROL OR COUNTER THE UNMANNED AND REMOTE?**

*Abstract*

With the growing need to regulate unmanned air traffic, a mechanism for all drone operators and manned aviation to be able coordinate with one another will be needed to ensure conflict resolution, approvals of flights, and compliance with local airspace boundaries. Many organisations are testing beyond the line of sight and autonomous flight. This is a call to all regulators and aviation authorities to develop a comprehensive system for monitoring and tracking unmanned aerial vehicles.

*Keywords*: unmanned aerial vehicle, UAV, drone, risk, aviation, flight, pilot, vulnerability, threat, attack, vector

**Introduction**

The growing use of drones represents a threat to personal privacy as well as safety for the aviation and regulation authorities around the world. When a new technology emerges, new rules and technical arrangements are needed to facilitate and regularise the smooth running of this technology without disrupting people's lives. This is the case with UAV/drone technology. Unmanned aerial vehicles will soon fill cities and airspace will be occupied by drones, resulting in more air traffic. Thus, more sophisticated methods of detecting and identifying drones will be required.

Drones and other unmanned aerial vehicles (UAV) are widely developed and deployed for different applications ranging from agriculture monitoring, commercial aerial surveillance, disaster relief, package delivery and motion picture filming. There is an increasing necessity to have external systems for UAVs to be detected and located. It is necessary to identify them because drones will soon become part of our daily lives.

The wide use of UAVs requires their accurate control and real-time monitoring. Cooperative UAVs are those which transmit their location themselves while non-cooperative UAVs need some kind of external system to be detected and located. It is necessary to identify them because drones are becoming part of our daily lives.

UAVs are currently used for a wide range of missions, for example, outskirts observation, surveillance, transportation and attacks. The administration of UAVs should be reliable, robotised and self-ruling.

Thus, political and military administrations have the expectation towards UAVs to protect national security via reconnaissance or even battle missions. In order to meet these expectations and succeed in these missions, UAVs must gather and process information extensively.

Because of the above factors, UAVs may also have to process and store a wide array of data, ranging from troop moves and developments to information on nature or environment and key tasks. The quantity and range of data covered lead to UAVs to become a particularly attractive target for secret activities and therefore make them susceptible to being stolen, controlled or attacked. An example of this is the loss of an RQ-170 Sentinel to Iranian military authorities on 4 December 2011. This demonstrates that past attempts to recognise opportunities and strengthen UAVs have been lacking.

**The importance of analyzing UAV vulnerabilities**

Due to the increasing dependence on UAVs to ensure national security realized by administrative and military powers, it is inevitable to have a systematic, solid investigation of vulnerabilities is necessary.

Cyber conflicts often target civilian infrastructures or even military infrastructures or computer systems. When imagining the future of warfare, we often envision newly developed weapons systems and anticipate their impact on the actual conduct of warfare. Not all warfare evolutions, however, can be encapsulated by individual systems or platforms.

The most radical changes in the conduct of war often result from particularly extensive technological revolutions that apply across multiple weapons systems, altering the very nature of the constraints and imperatives that drive combat decision-making.

One such revolution currently underway is the proliferation of sensors. Warfare utilizes sensors in countless ways – from optical sensors (aka cameras) to electronic intelligence sensors, up to full-fledged radar systems – and they are not new to the battlefield by any means.

However, rapid technological advances in multiple fields have vastly expanded military sensor capability. Defense industries are developing new kinds of sensors at an accelerated rate – smaller, stronger and more accurate than previous generations.

All are supported by modern platforms that carry significantly more sensors into the battlefield than previous systems. And beyond the sensors themselves, technologies that enable operators to simultaneously process large volumes of data are increasingly potent.

The realm of warfare is well on its way to sensor proliferation, and changes are coming rapidly.uter systems. The increasing level of improvement in present day tactics and strategies and the reliance on these specific tools require the assessment of the vulnerability of cutting edge military systems and assets to specialized assaults.

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Meanwhile, previously predominately used by military administrations, UAVs are becoming progressively important for more common applications. UAVs may depend on in-built computers or be controlled remotely by pilots at ground stations. Various episodes relating to automatons have been reported on by the general media in the last seven years, which evidences and increases the public's enthusiasm for military and non-military personnel drone applications.[1]

It is both captivating and abnormal that more research is done into the security of present day vehicles uniting vehicle-to-vehicle and vehicle-to-framework correspondence than investigation into the security of UAVs. It is indistinct whether this is because of the shut source legislative issues coming about because of UAVs' military causes or whether these gadgets are essentially viewed as secure as a result of their one of a kind assignments.

Framework security ought to never be considered as a state, yet rather as a system. So as to help this technique, it is significant to be prepared to portray and survey the present security status. Besides, it is fascinating to have the choice of examining framework arrangements as respects security levels.

Knowing the vulnerabilities of a system is essential in determining how secure it is. In fact, the actual vulnerability of a system is the part that is most likely to break down as a result of certain events. Depending on the seriousness of the breakdown, ranging from the total loss of control or destruction of the system to minor errors, such vulnerability may pose a risk to the system's security. In other words, a risk is a conceivable event with a major impact on the system's security. An event may either be an attack or an occasion.[2]

As it concerns system security, a risk is a combination of the seriousness of the effect of an attack on the security systems, increased by the likelihood of the event. Subsequently, risk evaluation measures the conceivable severity and probability of attacks. It is a key incentive for any significant level security system.[3]

Interestingly, attackers scanning for targets follow a similar path to system designers planning a protected system. An attacker scans for a system weakness implying a great danger or inferring a high risk. A system planner attempts to remove vulnerabilities implying serious dangers and strengthens the system through a combination of ways of dealing with stress.

To improve the system's security, it is essential that the system planner find vulnerabilities before attackers do. This is accomplished by consistent risk investigation, which is rather appraisal. There are risk evaluation plans for most types of software and equipment components. Nevertheless, no such risk evaluation plot or rule for UAVs was found. Alarmingly, the revealed events relating to UAVs demonstrate that risk appraisal for UAVs – whenever used – is certainly inadequate.

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[1]    BALDOR, L. C.: Flashy drone strikes raise the status of remote pilot; The Boston Globe, 2012.

[2]    BISHOP, M.: Introduction to Computer Security; Addison-Wesley Professional, Boston, 2004.

[3]    JAQUITH, A.: Security Metrics: Replacing Fear, Uncertainty, and Doubt; Addison-Wesley Professional, Boston, 2010.

**Identification and detection methods**

A grassroots drone attack would probably prove far less deadly than a shooting or a vehicular attack, simply because manufacturing a lightweight, deadly drone munition is so difficult. If a drone attack were conducted in a large crowd, the panic it would generate may well cause more injuries than the device itself.

Furthermore, as awareness of the threat spreads, more countermeasures are being developed and deployed to prevent drone attacks. And these preventive measures, whether to physically stop drones or to interrupt their radio signals electronically, will evolve to keep up with advances in the technology. Even though terrorist attacks using drones are likely coming, their physical impact will be limited.

As the ability to deploy sensors and combine their information increases, so will efforts to disrupt this capability, most likely through the denial of networking and processing capacity by means of electronic warfare and cyber warfare.

Increased capabilities from sensor technology will not alter the nature of warfare at its core, but it will further widen the gap between highly technologically advanced military powers and less developed military forces.

Every UAV needs to be identified individually and registered in local airspace control to avoid any unwanted problems. This identification has to be indisputable. Therefore, various ways to detect, track, and interdict potentially unauthorized drones carries critical importance for surveillance and ATM applications. Two categories should be considered. Firstly, the identification of the signal being sent from a drone which can be read in the area where the drone is operating. Secondly, registration of the UAV on the air traffic control system server.[4]

Drones increasingly need a communication channel to communicate seamlessly. Thus, a method for incorporating the detection and identification of drones is necessary. Every time there is a new drone in an area, it should be detected with drone detection technologies and registered in the local air traffic control system.

A geographical map can be added to the drone identification system to locate it more accurately. This facilitates the identification and location of a drone in a given geographic area as well as sharing it with the responsible authorities.

*Some key detection technologies:*

1.Wave Radar – mmWave radars are compact devices used for surveillance in conditions of poor visibility. These radars demonstrate low absorption due to rain, fog, smog and dust. They are active sensors. SSRS are radar sensors operating at 94GHz with 750 MHz bandwidth and 20 cm resolution.[5] High RF bandwidth and

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[4] TEJEDOR, E. – HAYES, S. – LIN, X. – TAKACS, A.: Drones and networks: Ensuring safe and secure operations; 2018.

[5] CARIS, M. – JOHANNES, W. – STANKO, S. – POHL, N.: Millimeter-wave radar for perimeter surveillance and detection of MAVs (Micro Aerial Vehicles) – IEEE Conference Publication; Ieeexplore.ieee.org, 2019. https://ieeexplore.ieee.org/document/7226314/. (downloaded 01 March 2020)

resolution enable them to detect and identify UAVs at a range of 10 m to several hundred meters. They provide 1.25 azimuth for cross-section resolution. The power of RF waves used is below the range of that of mobile phones, making it less dangerous. Doppler characteristics assist in differentiating and following the target UAV.[6]

2. UWB Radar – UWB radars use pulse modulation where very narrow bursts are modulated and sent. UWB devices are used for communication, detection and location of objects. Nakamura and Hadama[7] have studied the feasibility of using UWB for drone detection and measured the radar cross-section of a typical drone to be used for detection.

3. Doppler spectrum plays a vital role in analysing the signatures of identification and classification of drones. Harmanny et. al.[8] have recorded the micro-Doppler 'signatures' of various models of drones and also differentiated between drones and birds. While Ritchie et. al.[9] have analysed the 'signatures' of drones with different payloads and without payloads. Short-time Fourier transform was used to analyse the characteristic 'signatures' of different drones without payloads. The experimental setup involved three static radars operating at 2.4 GHz frequency.

Other techniques involve visual sensors, acoustic sensors and RF signals being transferred between UAV and controller. By Nguyen et. al.[10] two possible scenarios for UAV identification are described, namely sniffing of the signal between controller and UAV and reading the reflection from the drone's propellers.

### Role of cyber, security, safety and resilience

UAVs are exceptionally uncovered in specialised systems. To investigate UAV vulnerabilities, it is crucial to understand what components a UAV is made of and how these parts work together. To break down UAVs on a typical premise, we depicted UAVs as component models.

The UAV's foundational, core or base system" is the foundation of the UAV connecting relevant UAV components. The action or whole process of this synthesization and connection allows inter-component communication and provides wider control of the sensor, route, aeronautical and correspondence system. The more efficient the process, the more the UAV can be defined as an UAV operating as a "working system."

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6   GUVENC, I. – OZDEMIR, O. – YAPICI, Y. – MEHRPOUYAN, H. – MATOLAK, D: Detection, localization, and tracking of unauthorized UAS and Jammers; 2017. IEEE/AIAA 36th Digital Avionics Systems Conference (DASC)

7   NAKAMURA, R. – HADAMA, H.: Characteristics of ultra-wideband radar echoes from a drone; IEICE Communications Express, 2017/9. pp. 530-534.

8   HARMANNY R. – DE WIT, J. – PREMEL-CABIC G.: Radar micro-Doppler mini-UAV classification using spectrograms and cepstrograms; International Journal of Microwave and Wireless Technologies, 2015/3-4. pp. 469-477.

9   RITCHIE., M. –FIONARELLI. F. – BORRION, H. – GRIFFITHS, H.: Multistatic micro-Doppler radar feature extraction for classification of unloaded/loaded micro-drones; IET Radar. Sonar & Navigation, 2017/1. pp. 116-124.

10  NGUYEN, P. – RAVINDRANATHAN, M. – NGUYEN, A. – HAN, R. – VU, T.: Investigating Cost-effective RF-based Detection of Drones. DroNet'16; 2016.

Furthermore, this foundational base system enables the synchronization of other components, like additional sensors or weapon systems. These UAV sensor systems may actually mean the tactile hardware itself of the UAV together with incorporated pre-processing capabilities and functionalities. In case of basic military UAVs, these sensors are frequently cameras with various capacities. UAVs may be fitted with further sensors, for example INS, GPS and radar.

The focus on defence, security and resilience, additionally strengthened by such organisations' and platforms' activity, will provide a deeper understanding of a wide array of areas that include state security, cybersecurity and disaster resilience.

These involve highly novel applications of system analysis in enhancing security and resilience. The importance of such endeavours is to measure the possible effect that dangers pose to how communities adapt to their changing social, industrial contexts and environments.

The UAV avionics system is able to transform received control signals into engine, flaps, rudder, stabiliser and spoiler commands. UAV in-flight communication is always remote and can be divided into two types:
a) direct, line-of-sight (LOS) communication and
b) indirect, mostly–satellite communication (SATCOM).

One example of such a UAV, the RQ-170 Sentinel, can run autonomously. They can also be equipped to hold and operate weapons just like weapon support systems (for example, the MQ-9 Reaper).

The all-encompassing UAV component model's information flow inside may differ according to UAV type. Internal communication may be significant for an attacker if the attacker has access to the internal system.[11]

Unless physical access to the UAV is available, an attacker must access and influence the UAV remotely. Making action easier for an attacker, UAVs are profoundly influenced by external input and thus provide different input channels.

Considering the "remote nature" of UAVs, their channels are remote and hence difficult to strengthen. There are a few information flows between a UAV and its environment. The two most significant operational associations are:
1) the bidirectional information flow between the communications system and the ground control station (GCS)
2) the information flow from the environment to the sensors.

However, further impacts of nature on the UAV must be considered. These are the changes in the UAV's altitude actuated by aeronautics, the consequence of weapons on the earth and the impact of the environment on communications.

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[11]  TORUN, E.: UAV Requirements and Design Consideration. RTO SCI Symposium on Warfare Automation: Procedures and Techniques for Unmanned Vehicles, Ankara, Turkey, 26-28 Apr 1999

The dependence of sensors and system components are, for the most part, explored during system planning; consideration of the responsiveness of a sensor or system part to control is not normal. What should be considered regarding unauthorised control of a UAV is information on the receptiveness of the system parts to control. Receptiveness must be considered during system planning to prevent third parties exploiting this information.

### Vectors and attacks

News of the war in Ukraine traveled around the world just as uncrewed aerial vehicles (UAVs) were becoming widely available, even in a combat zone. Today, fueled in part by Soviet-era technological know-how, the skies over eastern Ukraine are alive with pilotless 21st century air power winging over a shredded landscape of World War I-style trenches and Soviet artillery.

When the war started, in 2014, the Ukrainian army was the second biggest in Europe, but it did not have a single modern UAV. Arrayed against Ukrainian government forces was a Russian military that was modernizing itself and backing a rebel force in eastern Ukraine.

The Kremlin was embracing asymmetric tactics ranging from false flag operations to cyber warfare. Ukraine had an army of conscripts withered by a quarter-century of corruption and funding shortages.

Drones rely on GPS or radio signals to navigate, so as the Russian-backed rebels – and to a lesser extent, the Ukrainians – jam one another, a sort of signals-warfare arms race has evolved. The inclusion of UAVs into military operation was accompanied by a succession of mishaps broadly affecting the general security of UAVs.

Another intriguing incident was the alleged theft of an RQ-170 Sentinel. It is generally acknowledged that Iranian forces are in the ownership of the RQ-170 Sentinel. This case was confirmed by a press release by US President Obama, requesting the return of the UAV.[12]

Nonetheless, the circumstances under which the UAV came into the possession of the Iranian forces are open to dispute. There are two famous hypotheses which clarify how the RQ-170 Sentinel may have been lost.

The principal hypothesis speculates that a weakness of the UAV sensor system with impacts on the routing system was used to attack the GPS system.[13]

In general, such an attack theoretically uses relies on knowledge regarding GPS usefulness or its limitations. This makes it simple to attack the GPS arrangement of a UAV by a "GPS spoofing" attack. The satellite signal of the GPS is covered and disturbed by a spoofed GPS signal sourcing from a transmitter with a stronger signal

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[12]   BISHOP op. cit.
[13]   TORUN op. cit.

nearby. The spoofed GPS signal recreates the GPS satellite signal, driving on a distorted estimation of the UAVs current position.

A supporter of the hypothesis can actually reason that Iranian forces have successfully attacked the satellite correspondence of the drone and spoofed the GPS signal to have the drone land securely on an Iranian airfield. While this attack is difficult to execute, it is not inconceivable. Yet, the capability of Iranian forces to have enough information and methods to accomplish a GPS spoofing attack remains debatable.

The other hypothesis connects the loss of the UAV due to a specialised error. The hypothesis proposes that the UAV may have landed in an Iranian area because of a specialised breakdown. This may have enabled Iranian forces to retrieve the UAV. Both hypotheses demonstrate security issues.

The GPS spoofing hypothesis underscores the need to incorporate further, unusual components in UAV risk evaluation. Partially efficient systems like UAVs rely on their sensor systems to work accurately. Moreover, the sensor system must be assessed as a constantly open information channel, which may subsequently be susceptible to attacks.

### Risk assessment framework

When surveying the risk of UAV security violations based on the below introduced component models, the general risk appraisal of a UAV is the summation of its components risk evaluation.

The risk evaluation context, inputs and results have a multi-dimensional. This defines or influences the risk evaluation depending on the type and power of security required. Thus, the result is a component-focused yet insightful, probability-based assessment of integrity, confidentiality and availability of the UAV.[14]

An output meaning a high score for example in the risk evaluation framework correlates with high risk concerning the loss of confidentiality, integrity or availability. The process overall provides data on the susceptibility of parts to attacks and on the integrity, confidentiality or availability of each part of the UAV.

Values in the range of 0 and 1 are assigned to the part (0 - "not susceptible," 1 - "highly susceptible") depending on the degree of susceptibility.

The values are assigned by the framework in accordance with the vulnerability of the analyzed part to attacks affecting integrity, confidentiality or availability. The particular probabilities of the event of an attack are increased with the importance of the weakness in order to compute the risk.[15]

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[14]   JAQUITH op. cit.
[15]   YOUNG, C.: Metrics and Methods for Security Risk Management. Syngress Media, 2010.
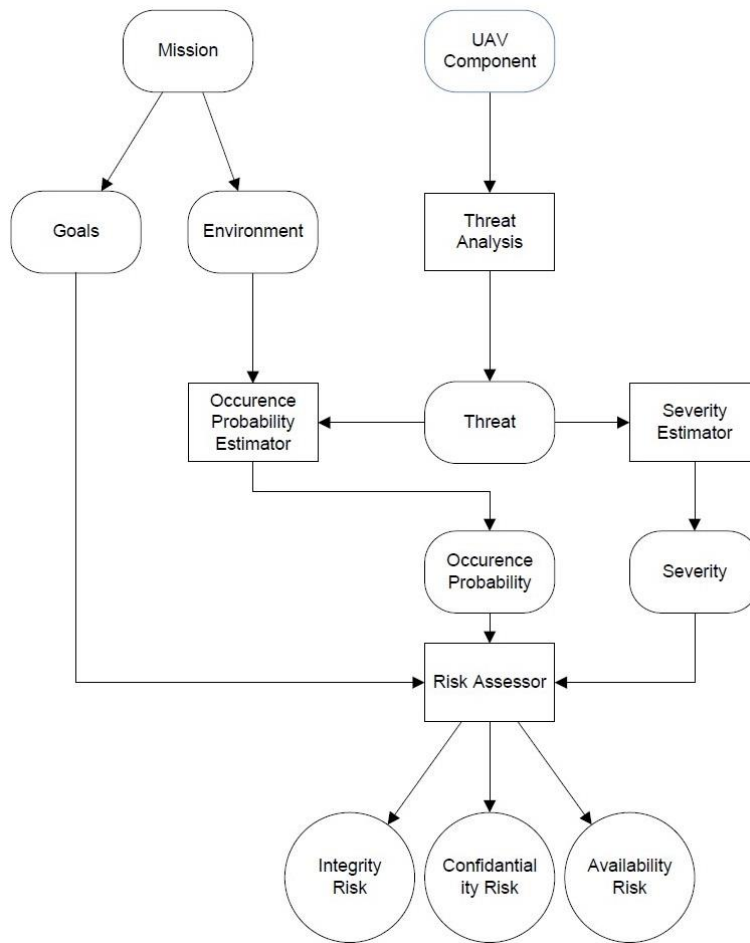
*Figure 1: Overview of the introduced UAV risk assessment framework*

The outcome should be assessed in accordance with the severity of the loss of integrity, confidentiality or availability of the explored part of the UAV. Security parts may be in conflict. The multi-dimensional analysis of risk explores the various requirements of UAVs. As indicated by the general assignment of the UAV, various security parts play different roles and should be weighted accordingly. Hence, the risk evaluation of UAVs is always alignment (to context and mission) focused and mission-specific.

**Conclusion**

UAV risk evaluation is a complex task comprising vulnerability and threat analysis; moreover, it is mission-specific. The UAV related episodes examined suggest that risk evaluation plans for UAVs are lacking or deficient. The proposed framework is an attempt to depict and formalise UAV risk evaluation.

The component model of UAVs was intended to order and characterise a component-based risk assessment. The components "communication system," "data storage" and "sensor system" were examined depending on the innovation employed and its known vulnerabilities. Ecological factors and issues relating to maintaining devices were may also be examined.

The qualities determined may give an indication of the susceptibility of an UAV explored to attacks affecting availability, integrity or confidentiality.

In the described framework and its theoretic and practical context, the risk was defined as the output of the susceptibility of a UAV compounded by the probability of occurrence of a particular attack on a component's vulnerability and increased by the severity of the attack.

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ZSOLT BEDERNA – ZOLTÁN RAJNAI PROF. DR.

## REVIEW OF THE ADVANCEMENT OF CRITICAL INFORMATION INFRASTRUCTURES AND THEIR STRUCTURAL ANALYSIS

*Abstract*

Due to the technical advancement, Information and Communication Technologies have been a critical part of our life in several layers resulting in conformity and faster administration. On the other hand, threat space has expanded and altered to be more complex and interconnected as an undesired effect by this advancement. There must be mandatory tasks defined by legislation to create a uniformly secure defence. The operators of these infrastructure elements shall follow the rules and implement necessary processes as a measure against risks posed by a vast amount of threat agents.

This Paper aims to review the types, structure, and nature of (information) infrastructures that pose to be critical for the society, as well as the connected legislation in the European Union. Furthermore, we analyse the current status to determine further potential enhancements of defending critical infrastructures.

*Keywords*: Critical infrastructure, Critical information infrastructure, NIS Directive, Cyberspace of the European Union, Cyber-defence

### Introduction

The technical advancements of Information and Communication Technologies (ICT) in the recent past and nowadays have political, economic, and social effects. Because of the technological advancements, threat space has expanded and altered to be more complex and interconnected as an undesired effect. Meanwhile, the dependency on ICT has been continuously increasing.

The European Union (EU) has also recognised that several critical infrastructures (CIs) has ICT elements, and even, an ICT element can be a CI on its own. Therefore, the importance of cybersecurity, that is posed to protect interconnected ICT devices in the cyberspace are exponentially elevating.

To ensure the uninterrupted operation of information society and information economy, the EU also started to enhance the Critical Information Infrastructure Protection (CIIP). But it is based only on the (Digital) Single Market simply treating the Internet as a communication tool or trading platform. However, the fact is that cyber threats pose much broader risks for the EU and its Member States.

The aim of this Paper is the review of the advancement of CIIP with pointing of further development opportunities. To fulfil this objective, we show the EU's legislation advancements for both Critical Infrastructure Protection (CIP) and CIIP,

and then we analyse the structural and defence approach of CI elements. Finally, we summarise, conclude statements, and make further development opportunities.

**Evolution of critical infrastructure protection in the European Union**

In the EU, the need for a solid approach arose publicly in March 2004[1]. As a consequent, the European Council (EC) asked the Commission and the High Representative to prepare an overall strategy to protect critical infrastructure in June 2004[2]. The Commission had identified that (1) the consequences of an attack on the industrial control systems of CI could vary widely; (2) a successful cyberattack would cause loss of vital infrastructure service or even it might lead to more widespread loss of lives; and (3) failure might be when one part of the infrastructure leads to the failure of other components, causing a widespread cascade effect.

As the Council defines, CIs "*consist of those physical and information technology facilities, networks, services and 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 in the Member States*". Banking and finance, transport and distribution, energy, utilities, health, food supply and communications, and key government services had been recognised as the extension of CIs.

Due to the structure and operational principles of the EU, especially the subsidiarity principle, the protection of infrastructures has a transboundary effect in focus. In contrast, the other infrastructural elements stayed under the sole responsibility of the Member States but a common framework.

This fact was the base for the European Programme for Critical Infrastructure Protection (EPCIP). In connection with the EPCIP, a so-called Critical Infrastructure Warning Information Network (CIWIN), assembling the EU Member States CIP specialists, could assist the Commission in drawing up the programme.

The European Council endorsed the Commission's advice. There were two seminars held in connection with EPCIP. The first one was in June 2005 with the participation of Member States, while the second one was in September 2005 where economic operators contributed, too. As a result, the Commission finalised its Green Paper on a European programme for critical infrastructure protection[3] intending to receive feedback concerning possible EPCIP policy options by involving a large number of stakeholders.

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[1]   Council of the European Union: Declaration on combating terrorism, 2004. https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/79637.pdf (downloaded 16 May 2020)

[2]   Communication from the Commission to the Council and the European Parliament: Critical Infrastructure Protection in the fight against terrorism, 2004. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52004DC0702 (downloaded 16 May 2020)

[3]   Commission of the European Communities: Green Paper on a european programme for critical infrastructure protection; 2005. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52005DC0576 (downloaded 16 May 2020)

The Commission presented the advised principles and a framework for the EPCIP in December 2006[4]. The principles were (1) subsidiarity (as discussed before); (2) complementarity to avoid duplicating existing efforts at EU, national or regional level; (3) confidentiality Critical Infrastructure Protection Information (CIPI) to be classified appropriately both at EU level and Member State level; (4) stakeholder cooperation for involving all relevant stakeholders in the development and implementation of EPCIP; (5) proportionality to measure the appropriate level of risk and type of threat involved; and (6) sector-by-sector approach to involve experience, expertise, and requirements following an agreed list of CIP sectors.

Finally, the Council Directive 2008/114/EC was accepted on 8th December 2008 for identification and designation of the European critical infrastructures and the assessment of the need to improve their protection with implementation obligation for Member States by 12th January 2011[5]. Unfortunately, only the Energy and Transport sectors were designated, while ICT was completely omitted.

The process of reconciliation was advancing slowly, even though the (Digital) Single Market's progression, exponential expansion of the telecommunication technologies, and the fragmentation of threats were causing more significant risks from day-to-day[6].

**Evolution of cybersecurity in the European Union**

The EU did not have any legal or technical capability to measure CII related threats in cyberspace. Furthermore, the EU simply treated ICT services as a communication tool and a trading platform. Thus, network and information security (NIS) was necessary only to defend this platform. Hence, the EU started to set the ground of common cyber-defence on the (Digital) Single Market, but without any connection to CI.

As the first step in 2004, by the acceptance of Regulation (EC) No 460/2004[7], the EU established the European Network and Information Security Agency (ENISA) for five years only with promoting, supporting, and advisory functionality for the Member States when called upon. Furthermore, ENISA got to be responsible, int.al., to (1) enhance cooperation between different actors (including private and public); (2) facilitate cooperation between the Commission and the Member States in the

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4  Commission of the European Communities: Communication from the Commission on a European Programme for Critical Infrastructure Protection, 2006. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52006DC0786 (downloaded 16 May 2020)

5  The Council of the European Union: Council Directive 2008/114/EC 2008. http://data.europa.eu/eli/dir/2008/114/oj (downloaded 16 May 2020)

6  PRÉCSÉNYI, Zoltán – SOLYMOSI, József: Úton Az Európai Kritikus Infrastruktúrák Azonosítása És Hatékony Védelme Felé; Hadmérnök 2007/1. pp 65-76. http://hadmernok.hu/archivum/2007/1/2007_1_precsenyi.pdf (downloaded 16 May 2020)

7  The European Parliament and the Council of the European Union: Regulation (EC) No 460/2004 of the European Parliament and of the Council of 10 March 2004 establishing the European Network and Information Security Agency, https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32004R0460 (downloaded 16 May 2020)

development of common methodologies; (3) contribute to awareness-raising, to track the development of standards; (4) contribute to Community efforts to cooperate with third countries and international organisations.

In 2007, the Estonian cyberspace was affected by a spectacular attack campaign. As effects and consequences, the EU started to find out possible new ways to enhance its cybersecurity and to figure out appropriate punishments for states found to have engaged in digital warfare. But the former Estonian Prime Minister Toomas Ilves still told in June 2016 that "*the biggest problem in cyber remains deterrence*"[8].

Later in 2008, the mandate of ENISA was extended with three years[9], then with two years in 2012[10]. The discussion on the extension of ENISA's mandate was also started in 2012. Meanwhile, NIS Cooperation Group, European-level Computer Emergency Response Team (CERT), the CERT-EU were established.

In 2013, the first strategy was accepted in the EU[11] with the motto of "An Open, Safe and Secure Cyberspace". It articulated five strategic priorities: (1) achieving cyber resilience; (2) drastically reducing cybercrime; (3) developing cyber-defence policy and capabilities related to the Common Security and Defence Policy (CSDP); (4) develop the industrial and technological resources for cybersecurity; and (5) establish a coherent international cyberspace policy for the EU and promote its core values.

On the EU-level, the strategy aims to repel cybercriminal activities by cooperation with the newly established European Cybercrime Centre (EC3), and it encourages cooperation between the public and private sectors to enhance CSDP capabilities. It sets security standards to be defined by the EU for ICT and cloud services. For the Member States, it established minimum requirements, int. al., to designate competent national authorities on NIS, establish responsible national CERT, and to create and accept national cybersecurity strategy. As stated, the Commission would continue the discussion with the Member States and CI operators to enhance cybersecurity-related CIP.

In the same year, ENISA was renamed to the European Union Agency for Network and Information Security (ENISA) with the mandate of a limited period of

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8   LIFLAND, Amy: Cyberwar: The Future of Conflict; Harvard International Review, 2012.
9   The European Parliament and the Council of the European Union: Regulation (EC) No 1007/2008 of the European Parliament and of the Council of 24 September 2008. https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:293:0001:0002:EN:PDF (downloaded 16 May 2020)
10  The European Parliament and the Council of the European Union: Regulation (EU) No 580/2011 of the European Parliament and of the Council of 8 June 2011 amending Regulation (EC) No 460/2004 establishing the European Network and Information Security Agency as regards its duration; 2011. https://www.enisa.europa.eu/media/news-items/extension-of-enisa2019s-mandate-published-1 (downloaded 16 May 2020)
11  European Union: An Open, Safe and Secure Cyberspace; 2013. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52013JC0001 (downloaded 16 May 2020)

seven years[12]. Although the responsibilities and functions were extended, e.g., with cooperation with CERTs and Computer Security Incident Response Teams (CSIRTs), but ENISA kept its promoting, supporting, and advisory characteristic.

Meanwhile the long preparation began, and finally, the NIS Directive[13] was announced on 6 July 2016 and entered into force on the 20th day following that of its publication in the Official Journal of the EU with transposition obligation on 9 May 2018 for Member States. That was almost two more long years. Reflecting on the CIP related legislative development, the slow advancing remains the same problem.

It defined the obligations for all the Member States to adopt a new or renewed national strategy on NIS. It created a Cooperation Group to facilitate strategic cooperation and the exchange of information among the Member States and to enhance trust amongst them. In contrast, it created CSIRTs network for effective operational cooperation. It laid down obligations for Member States to designate competent national authorities related to NIS. Finally, it defined essential services and for digital service providers and their security and notification obligations.

Lastly, the European Parliament accepted the legislative resolution on the proposal Cybersecurity Act to enhance ENISA[14]. The Cybersecurity Act[15] entered into force on 28th June 2019, granting a permanent mandate to ENISA with more resources and new tasks to have a key role in setting up and maintaining the European cybersecurity certification framework. Furthermore, ENISA also got a key role as secretariat of CSIRTs network.

### Discussion

As stated in the COUNCIL DIRECTIVE 2008/114/EC[16], National Critical Infrastructure (NCI) "*means an asset, system or part thereof located in Member States which is essential for the maintenance of vital societal functions, health, safety, security, economic or social well-being of people, and the disruption or destruction of which would have a significant impact in a Member State as a result of the failure to maintain those functions*". While the European Critical Infrastructures (ECIs) are on higher abstraction levels, as an ECI means CI "*located in Member States the disruption or destruction of which would have a significant impact on at least two*

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[12] The European Parliament and the Council of the European Union: Regulation (EU) No 526/2013 of the European Parliament and of the Council of 21 May 2013 concerning the European Union Agency for Network and Information Security (ENISA) and repealing Regulation (EC) No 460/2004; 2013. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:JOL_2013_165_R_0041_01 (downloaded 16 May 2020)

[13] The European Parliament and the Council of the European Union: 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 2016. http://data.europa.eu/eli/dir/2016/1148/oj (downloaded 16 May 2020)

[14] Regulation (EU) No 526/2013 op. cit.

[15] The European Parliament and the Council of the European Union: Regulation (EU) 2019/881; 2020. https://eur-lex.europa.eu/eli/reg/2019/881/oj (downloaded 16 May 2020).

[16] Council Directive 2008/114/EC. op. cit.

*Member States. The significance of the impact shall be assessed in terms of cross-cutting criteria. This includes effects resulting from cross-sector dependencies on other types of infrastructure*". Therefore, an ECI is a particular type of NCI.

The Annex II of the NIS Directive[17] identifies types of essential services with the appointment of the exact sectors: (1) Energy, (2) Transport, (3) Banking, (4) Financial market infrastructures, (5) Health sector, (6) Drinking water supply and distribution, and (7) Digital Infrastructure. From the list of defined essential services, the Electricity subsector should be in favour as the connection between the electricity sector and ICT has a duality. Power supply gives critical dependency for ICT as well as for other sectors, while ICT controls several subsectors of the energy sector. Critical dependency for ICT on power supply is shared between Member States, albeit the differences between Member States' solution make the continuity of supply more complicated[18]: „*there may be national and even regional differences between the continuity of power supply*".

Because of the complex interconnection between CIs, a problem affecting one or more CI elements may spill and spread forward, causing service continuity problems in one or more essential services. Strengthening resilience minimises the vulnerability of subsystems, which in turn curtails the occurrence, intensity, and propagation of failures and their impacts in a critical infrastructure system and society[19].

Therefore, dependencies or even interdependencies must be identified[20]. A dependency is "*a linkage or connection between two infrastructures, through which the state of one infrastructure influences or is correlated to the state of the other*", and an interdependency is "*a bidirectional relationship between two infrastructures through which the state of each infrastructure influences or is correlated to the state of the other*".

Due to this complicated relationship, there are three types of failures that systems have to be prepared[21]. A cascading failure happens when a failure in CI causes a failure in another CI (e.g., failure in power supply). An escalating failure is when a failure in a CI exacerbate an available problem in another CI (e.g., failure in an ICT which is itself serves as CII and gives services for other CIs). In the case of the common cause, the same event has a negative impact on two or more CIs (e.g., natural disaster).

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[17] Directive (EU) 2016/1148 op. cit.
[18] ENISA: Annual Incident Reports 2013 – Analysis of Article 13a Annual Incident Reports; 2014. https://www.enisa.europa.eu/publications/annual-incident-reports-2013/at_download/fullReport (downloaded 16 May 2020)
[19] REHAK, David – HROMADA, Martin: Failures in a Critical Infrastructure System; System of System Failures, 2018. https://doi.org/10.5772/intechopen.70446 (downloaded 16 May 2020)
[20] RINALDI, Steven M. – PEERENBOOM, James P. – KELLY, Terrence K.: Identifying, Understanding, and Analysing Critical Infrastructure Interdependencies; IEEE Control Systems Magazine, 2001. https://doi.org/10.1109/37.969131 (downloaded 16 May 2020)
[21] Ibid.

One of the essential elements of security is to prepare, implement, and keep on security measures by keeping risks under risk tolerance level, i.e., prevent unacceptable failures and its spilling and spreading. In system level, this means it shall be resilient, i.e., to be able "*to absorb, adapt to, and/or rapidly recover from a potentially disruptive event*". Resilience represents the level of internal preparedness of a CI element for emergencies or the ability of this element to perform and maintain its function[22].

However, to fulfil these previously mentioned tasks, there should be a common, comparable methodology for risk modelling and analysis, too. But per that the "*Member States have developed a variety of methodologies when it comes to the overall approach to the identification of OES*"[23], there is no common and comparable methodology that would assist in risk modelling and assessment to measure resilience. Each Member State and each operator may apply its defined methodologies.

On the other hand, operating according to rules when several operators affected, the most important element is trust between operators. However, trust-building may be a long process. As per NIST SP800-39[24], trust is a belief that an entity will behave in a predictable manner in specified circumstances. Obviously, the trust shall be made on each aspect of life, i.e., inter and intra organisations, ICTs, etc.[25], which can be based on objective evidence and subjective elements. The objective grounds of trust may be based on, e.g., legislation, result of audit, testing, evaluation conducted internally or by a third party; and the subjective belief may have origination of level of comfort, or experience that may supplement (or even replace) objective evidence, or substitute for such evidence when it is unavailable. Trust models describe ways of an organisation can obtain the levels of trust, that is needed for partnerships, information sharing, or receiving/giving information system/security services.

With the prescription of cooperation as, e.g., information sharing, the EU creates a framework based on mandated trust[26]. Precisely, Article 14 and Article 16 of the NIS Directive[27] define security requirements for Operators of Essential Services and Digital service providers. For both, it is mandatory to (1) take appropriate and proportionate technical and organisational measures to manage the risks, (2) take appropriate measures to prevent and minimise the impact of incidents, and (3) notify the competent authority or the CSIRT without undue delay of any incident. Article 16 (1) defines specific tasks for Digital service providers as (1) the security of systems and facilities, (2) incident handling, (3) business continuity management, (4) monitoring, auditing and testing, and (5) compliance with international standards.

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22 REHAK – HROMADA op. cit.
23 Directive (EU) 2016/1148 op. cit.
24 Joint Task Force Transformation Initiative. SP800-39 Managing Information Security Risk. Nist Special Publication (National Institute of Standards and Technology, 2011. p. 24 https://doi.org/10.6028/NIST.SP.800-39 (downloaded 16 May 2020)
25 BEDERNA, Zsolt: Bizalom És Megbízhatóság; Szakmai Szemle, 2019/1. pp. 135–149. http://knbsz.gov.hu/hu/letoltes/szsz/2019_1_szam.pdf (downloaded 16 May 2020)
26 Joint Task Force Transformation Initiative: SP800-39. op. cit. pp. G-1 - G-3
27 Directive (EU) 2016/1148 op. cit.

**Conclusions**

In this Paper, we reviewed the historical advancement of the CIP and cyberspace capabilities of the European Union. We showed that how demolishing the Estonian cyberattack was. However, Estonian got from stuck wisely, and the EU started a discussion on new ways of cyber-defence.

After one year of the Estonian cyberattack, the EU started the process of identification and designation of ECI and the assessment of the need to improve their protection, but without ICT. After nine years, finally, the NIS Directive came into force to concern measures for a high level of security of network and information systems across the European Union giving nearly two years for Member States to transpose it. It is precisely a ten-year delay compared to the Estonian cyberattack. The fact is that legislation advancement progressed slowly. Furthermore, the NIS Directive does not contain all relevant sectors. Despite of the interrelated nature of eGovernment, Member States prevented its integration into the directive. This must be made up short due to the interconnected nature defined by the European eGovernment Action Plan 2016-2020.

On operation level, there is an apparent difference between the Member States (and their private and public entities) in technological capabilities and processes' implementation approach, due to the multi-layer and multi-stakeholder approach, the nature of a directive as legislation salutation in the European Union, and the financial feasibilities. Furthermore, there is no common and comparable methodology to support risk modelling and assessment to measure resilience. Each Member State, each operator, may apply its defined methodologies.

On the other hand, due to the extensive legislation, there will be a need for consolidation in case of incident reporting requirements in the event of a cyber-breach. For example, the requirements for an institution or data controller to report or notify designated authorities, and for defined cases the public, in the event of a cyber-breach are covered in the following legislation.

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ANDRÁS KERTI – LAJOS ZÁHONYI

**A STUDY OF THE HISTORY OF INFORMATION SECURITY – INCIDENTS, METHODS, STANDARDS AND TRENDS**

*Abstract*

The situation of information security and its systems of reference tools – including the emergence of standards and methodologies – from the second half of the 20th century to the present day takes place in parallel with the development of informatics., Practically, it can be said that, tools of IT systems, corporate strategies, corporate management systems, project methodologies have in the last 20 years been trying to "pick up the pace" against the information security challenges and malicious attacks affecting IT systems. This study describes these tools.

*Keywords:* information security, history of information security, history of standardization, information security of Enterprise Resource Planning, ERP

**Introduction**

With the advent and rapid development of computers, the number, volume and storage size of information data being handled has multiplied many times compared to the previous periods. The high concentration of data storage has opened up new dimensions in the field of quantitative data processing. Whoever has access to this data can have access to huge information resources.

*"Information technology systems and components present new vulnerabilities, creating opportunities for new threats, primarily of an informational nature."*[1] The responsibility of the information managers and users has grown to enormous proportions, to make sure that this information is not damaged and is not distorted, and that such information and associated values will always be available to the authorized user and only to the authorized persons. This requires building a protection system that requires protection methods. And we have the tools to protect, as responses to recent information security challenges have emerged in the form of information security methodologies, and information security standards. This study looks back at the development history of information security and describes some of the larger-scale information security incidents that have indicated and are indicating development trends, presents standards or non-standard recommendations that help protect information data, and then recognizes some up-to-date trend responses that can be deduced from the new directions of development.

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[1]  MUNK, Sándor: Data Security vs. Information Security; Military Engineer, Special Issue, Robot Warfare 7th Scientific Professional Conference on Robot Warfare, November 27, 2007. p. 1.

*"I'm the Creeper, catch me if you can!"*

In this study, I would like to briefly demonstrate incidents in the recent past that have proved to be decisive in the development of information security and as such have had a key impact on the recommendations, standards and the establishment of protection systems.[2]

The first virus, the "Creeper"[3] appeared by the early 1970s. It was a self-replicating program that used the ARPANET regarded to be the forerunner of the Internet to infect DEC PDP-10 computers and to display the following message: *"I'm the Creeper, catch me if you can!".*

Between 1976 and 2006, about 30 years ago, Greg Chung, a Boeing employee, handed over $ 2 billion worth of space flight documents to China. The investigation uncovered 225,000 pages of documents containing sensitive information in his home. It was a malicious attack from within, the largest-scale one in history, the aim of which was to transfer military and space research patents and documents to a foreign country. This incident affected not "only" Boeing, but also U.S. national security.

In 2013, the Snowden case "exploded". Edward Snowden was an employee of the CIA and had an employment contract with the United States government. He copied and leaked classified information from the National Security Agency. While not the biggest attack from within, it was this incident that sparked the biggest social debate in the United States. His actions divided society, many people lost their trust in government agencies, but to this day Snowden is considered by many to be a hero.

Also in the same year, a group of hackers hacked 3 billion(!) Yahoo user accounts. Names, passwords, and answers to security questions were compromised. Yahoo tried to cover up the incident and did not report the violation until 2016. Finally, a US court imposed a $ 35 million fine on the company as compensation for having failed to report the incident on time. This case reduced Yahoo's selling price by $ 350 million.

2015 The US Office of Personnel Management fell victim to an attack. At the time of the incident, the data of 4.2 million past and current government personnel were stolen. This included 21.5 million security vetting files and 5.6 million fingerprints. This incident encouraged NGOs to embrace the issue of data security.

The first "ransomware" crypto-worm called " Wannacry", appeared in 2017, exploiting security gaps in the Microsoft Windows operating system. The ransomware encrypted the data on the computer and demanded Bitcoin cryptocurrency in return for the recovery key. It was the first "worm virus" in our global world to shock users. On the first day alone, it infected approximately 230,000 computers in 150 countries.

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2    HOSPELHORN Sarah: 8 Events That Changed Cybersecurity Forever, 2020. pp. 1-5.
     https://www.varonis.com/blog/events-that-changed-cybersecurity/ (downloaded 25 May
     2020)
3    Creeper - an English colloquial term meaning a person who "gives you the creeps" or who
     plainly seems to be prone to harassing others. Source:
     https://gyerekaneten.hu/szocikk/creeper (downloaded 25 May 2020)

Also in 2017 appeared on the NotPetya worm virus which exploited the vulnerability of the Microsoft Operating System in more than 12,500 MS users' – including energy companies, banks, airports and high-ranking government officials – IT systems and deleted data, demanding a "ransom" in return for sending the recovery key.

The biggest credit card data theft case to date occurred in 2017, when an estimated 143 million data were compromised when credit cards of 209 000 partners of the Equifax Credit Bureau were accessed by hackers. This incident led to the resignation of the CEO.

The few randomly selected examples above show well how systems change, challenges change, newer and newer areas of vulnerability need to be addressed and methods developed, implemented and applied.

*"The information on the IT system includes data on the structure and operation of the given system and the characteristics of the devices connected to the system. There is no perfect security, more and more attack methods and vulnerabilities appear every day, as a result we can't talk about protection covering all risks."*[4]

### The Beginnings: TCSEC / ITSEC / Common Criteria

The spread of mass application of personal computers for business purposes business in the international area has been parallel to the IT development period, the United States launched the development of the IT security requirements system.[5] The first document summarizing tangible recommendations, issued in 1983, was the Trusted Computer System Evaluation Criteria (TCSEC). This is also known as the "Orange Book". The main initiative for its publication came from the United States Department of Defense which published the security requirements applied in the department in 1967.

The goal of TCSEC was to determine and standardize the security levels of computer systems procured by the United States during the Cold War to protect classified information. The recommendation identifies four main security categories, namely categories "D, C, B, A and establishes further subcategories thereof.

The practice was also adopted in Europe and in the 1980s a harmonized information protection document was developed with the participation of Great Britain, Germany, France and the Netherlands. This became the Information Security Evaluation Criteria (ITSEC), which was finally published in 1991. This recommendation volume later became a user manual.[6] These documents did not deal specifically with IT system security measures, but in general, which greatly hindered the customization of IT systems security. The ITSEC security categories were marked between LEVEL 0 and LEVEL 6.

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[4]    The Psychology of Information Security: The study of KÖFOP-2.2.2-VEKOP 16-2016-00001

[5]    MUHA, Lajos– KRASZNAY, Csaba: Security Management of Electronic Information Systems National University of Public Service, 2014. p. 27.

[6]    MIGGA KIZZA Joseph: Computer Network Security, 2005. p. 421.

Against this background, the European Union has developed, with support from the governments of the United States and Canada, the Common Criteria document which tried to combine content and technical elements of the US TCSEC and the European ITSEC recommendations, made in line with the differences and specifications developed for applications areas. The first three chapters of the Common Criteria (CC) have the same content as the standard ISO/IEC 15408, "Common Criteria for Information Technology Security Evaluation, Version 2.0".

The spreading of the Common Criteria beyond a certain level was not facilitated by the fact that in practice the evaluation process is slow and quantitatively exaggerated, the document requires very thorough, in-depth and impractical examination while concepts and definitions set out in the document had to be kept in mind during the evaluation.

**A system standardized on the basis of an International Compendium: ITIL and the ISO / IEC 20000**

The compendium named ITIL (Information Technology Infrastructure Library) is a collection of recommendations for developing collaborative IT service management processes designed to ensure the quality of IT service at customer-agreed service levels. The principles of IT Service Management ITIL is based on documented "best practices".[7]

The ITIL is primarily a compendium of methodology for the operation and development of an IT system or a collection of information security recommendations that secondly it contains.

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[7]   ITIL – The methodology of IT services; KFKI Számítástechnikai Rt. Version: 3.1, 2002. p. 5.
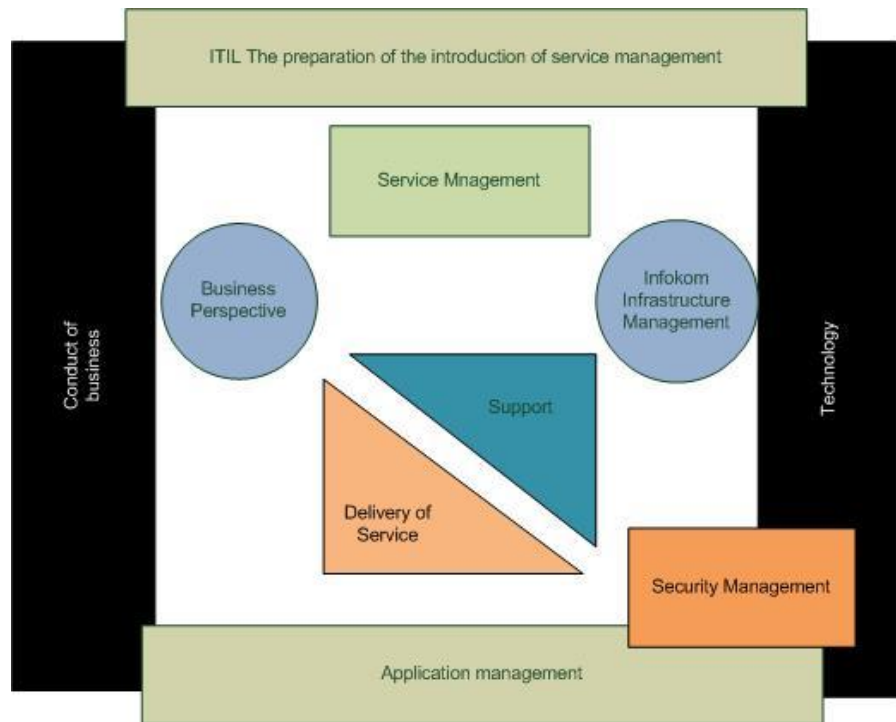
*Figure 1: ITIL Documentation System – Security management is part of the system*

The Security Management Volume expands ITIL processes with security management. The security management process, while separate as far as possible, is integrated into the other processes. In addition, it introduces best practice measures and guidelines to assist in the implementation and operation of security management. The BSI Code of Practice for Information Security Management (BS7799) uses British Standards Publication as a reference.

ITIL dates back to the 1980s, with versions 2.0 released in 2006, 3.0 in 2007 and 4.0 in 2019. Nowadays, it has become a "de facto" international standard that is recognized by several global software companies SAP, ORACLE, Microsoft and incorporated into the security foundations of ERP (Enterprise Resource Planning) systems. Evidence of the significant impact is also the fact that its user organization operates in several countries and that the IT infrastructure has become a dominant methodology thanks to its recommendations on IT services and information security.

**International Recommendation from Government Recommendations - History of ISO 7799 / ISO17799/ISO 27002**

BS 7799 is a standard that was originally published by the BSI (British Standards Institute) Group based on recommendations compiled by the UK Department of Trade and Industry (DTI) in 1995.[8] This collection consisted of two characteristic parts.

The first part came out as the practical code of information security management and included a large number of control and monitoring criteria, which, if applied and operated appropriately, ensure a working information security solution. This part was the "department store" of control criteria, some of which were usable in a relevant way, criteria which dispenser when used while the others were applicable depending on the business model and market position of the given organization.

The second part was published as the specification of the introduction of the information security management system (ISMS).[9] This edition already contained practical guidelines for use. This can also be considered the forerunner of the ISO 27000 family of standards. It is interesting to note that the Swedish version of the BS7799 was also published almost immediately with the ISBN 627 799.

| ISMS structure (according to BS 7799) 1995 |
| --- |
| 1. Management approval to design the system |
| 2. Selection of an advisory body |
| 3. Creating a project organization |
| 4. Schedule tasks |
| 5. Trainings |
| 6. Situation assessment |
| 7. Define information security policy |
| 8. Information value and inventory |
| 9. Risk assessment |
| 10. Development of organization, rules, documentation |
| 11. Starting a test operation, introducing a system |

*Figure 2: BS 7799 - the structure of the "ancient standard" of information security*

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[8] Source: https://www.itgovernance.co.uk/files/Infosec%20101v1.1.pdf (downloaded 25 May 2020)

[9] Source: https://www.bcs.org/content-hub/the-importance-of-bs7799/ (downloaded 25 May 2020)

The recommendations of BS 7799 Information Security Management were revised in 1998 and then after lengthy discussions and debates of the International Organization for Standardization (ISO) adopted as the ISO / IEC 17799 standard.[10] This standard eventually incorporated in the ISO 27000 series of standards as ISO/IEC 27002 standard.

**Consistent and comprehensive recommendations: COBIT**

Standardization efforts have intensified in parallel with the development of information technology. From the 1980s onwards, the business use of computers became more widespread. The use of business processes and data within it has begun to move towards unified practice. There is a growing need to create some kind of unified framework that helps to protect the information in the system as a "guideline".

The answer to this need is COBIT (Control Objectives for Information and Related Technology), the most common set of rules, which is not a standard and is not registered as such, but is often used in a standard way in practice. This is an information referral to a collection framework, which mainly serves the purpose of information technology auditing.

*"COBIT places the main emphasis on four areas of business processes and the IT solutions that support them – planning and organization; procurement and commissioning; IT services and support; supervision."*[11]
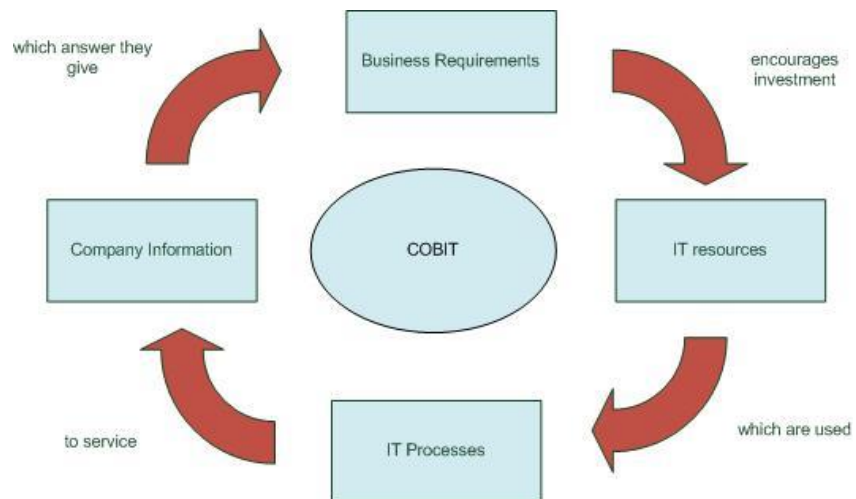


*Figure 3: The COBIT system process*

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[10]   Source: https://www.iso.org/standard/33441.html (downloaded 28 May 2020)
[11]   MUHA– KRASZNAY op. cit. p. 34.

COBIT covers business processes and the four areas of IT solutions that support them – planning and organization; procurement and commissioning; IT services and support; supervision – and puts the main emphasis on them.
The 5 processes of COBIT:

- Evaluate, Direct and Monitor, (EDM)
- Align, Plan and Organize (APO)
- Build, Acquire and Implement (BAI)
- Deliver, Service and Support (DSS)
- Monitor, Evaluate and Assess (MEA)

**The most common system of information security tools: the ISO 2700 1 and 27000 family of standards**

MSZ ISO 27001:2014 standard: Information technology. Security techniques. Information security manage-ment systems.)

The international standard ISO27001 is designed to provide requirements for the design, implementation, maintenance and continuous improvement of an information security management system.[12] The standard is process-centric, it uses the Plan-Do-Check-Act (PDCA) model and can be integrated with existing quality management (ISO 9001) and environmental management (ISO 14001) systems.

It is a strategic decision for a given organization whether to introduce the information security management system or not. The system design is influenced by the organization's goals, processes, the size and structure of the organization, and its security expectations.

The information security management system maintains the confidentiality, integrity and availability of information through a risk management process and builds trust among stakeholders that risks are being addressed satisfactorily.[13]

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[12] MSZ ISO/IEC 27001: 2014 standard p. 6.
[13] Ibid.

| ISMS structure according to ISO 27001 (2013) |
|---|
| 1. Information Protection Regulation |
| 2. Structure of information protection regulations |
| 3. Declaration of Applicability |
| 4. Measures, references |
| 5. Protection policy, information security rules |
| 6. Information Security Organization |
| 7. Human Resources Security |
| 8. Asset Management |
| 9. Access Control |
| 10. Encryption |
| 11. Physical and environmental security |
| 12. Operational security |
| 13. Security of communication |
| 14. Information system procurement, development and maintenance |
| 15. Supplier Relationships |
| 6. Management of information security incidents |
| 7. Information security aspects of business continuity |
| 8. Compliance |

*Figure 4: Contents of MSZ ISO / IEC 27001: 2014 as the Hungarian standard ISO 27001: 2013 - drew a lot from the "predecessor" standard*

The ISO 27000 family of standards currently contains 84 different standards[14], which fully cover information security processes.

## ISO 27001 VS COBIT

In my study, I would like to briefly compare the COBIT and ISO 27001 systems. Starting with the clarification of the foundations, ISO 27001 is an international standard for the establishment, implementation, maintenance and continuous improvement of an information security management system. The standard is a joint publication of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). COBIT (Control Objectives for Information and Related Technologies) compared with an IT governance framework, which the ISACA (Information Systems Audit and Control Association) organization has developed. It is used in business development, organization and execution strategies around information management and control.

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[14] Source: https://hetpecset.hu/site/articles/view/isoiec-27000-szabvanycsalad (downloaded 20 May 2020)

| ISO 27001 | COBIT |
|---|---|
| International standard | An IT framework summarizing best practices |
| Start of ISO standardization: 1995 | Launch of the COBIT framework: 1996 |
| It defines the requirements of the establishment, implementation, maintenance and continuous improvement of the Information Security Management System. | It defines the efficacious requirements of IT governance processes, management and effective control. |
| It can be applied to any size and type of organization. | It can be applied to any size and type of organization. |
| Its introduction and use are subject to certification. | Its introduction is not subject to certification . |
| Current latest version: ISO 27001: 2013 | Current latest version COBIT 2019 |

*Figure 5 Comparison of ISO 27001 and COBIT systems*[15]

The key difference between ISO 27001 and COBIT is that while the former was created specifically for the purpose of information security, the latter was created for the management and control of IT business processes. COBIT system is seen as a kind of umbrella or even a large set that focuses on information technology management tools. COBIT is not only about security in an organization, but also includes the organization, planning and supervision of the operation of the IT organization as well.

ISO 27001 is, however, an internationally recognized information security management system standard focusing on performing risk assessments, which protects the critical information and data of the organization through the use of specialized controls.

**Information security corporate trends**

***SAP Security Information and Event Management***

The largest enterprise management system software vendor is SAP[16], and it also thinks along security challenges. The gradual expansion of the functions of enterprise management systems has not escaped the information security aspects of ERP systems either. SAP Enterprise Threat Detection[17] identifies, analyzes, and neutralizes cyber-attacks on the system as they occur and before they cause serious damage to the system. This is accomplished through the use of the "Security Information and Event Management (SIEM)" tool, which uses real-time intelligence to effectively manage

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[15] YADAV Neha: ISO 27001 vs. COBIT: A comparison, 2019. https://advisera.com/27001academy/blog/2019/05/06/cobit-vs-iso-27001-how-much-do-they-differ/ (downloaded 28 May 2020)

[16] The word SAP is an acronym for "System, Application and Product"

[17] Source: https://www.sap.com/hungary/products/enterprise-threat-detection.html#contact-us (downloaded 28 May 2020)

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system vulnerabilities to external and internal cyber security threats and ensure data protection.

*Oracle White Paper – Information Security*[18]

The other major global software vendor, ORACLE, released the "White Paper" in 2011, which sets out data protection and information security principles related to the software. ORACLE principles:

- "Defense in Depth" – Failure of any element of the security architecture should not compromise the entire IT environment.

- "Least Privilege" – system users are allowed as few exceptions as possible.

- "Security as a Service" – business solutions should be designed to operate as much as possible based on common security settings. Wherever possible, efforts should be made to omit unique security logic and to avoid copying copies.

- "Identity Federation" –The security infrastructure must provide identity mapping and credential mapping.

- "Secure Web Services" – Use of Web Services should not compromise compliance with complete system security and other security policies.

- "Secure Management of Security Information" Security information, such as the properties of user data, authentication data, groups, functions, must be managed centrally (holistically) throughout the organization in a secure and verifiable manner.

- "Active Threat Detection & Analysis" The security infrastructure must be able to detect abnormal behavior and adapt accordingly to protect resource vulnerabilities.

- "Secure, Complete Audit Trail" – The security system must be able to identify the time of changes to documents and processes and the individual effecting the changes.

- "Data Security" – The confidentiality, integrity and availability of data must be ensured at all times.

- "System Availability" Systems must be adequately protected so that protection does not unnecessarily impede the performance of activities.

*Cyber Essentials Certification*

IFSEC International is the integrated security exhibition in Europe which takes place every year at London. In this year appeared as a new trend19. The standard based on self-assessment "Cyber Essentials Certification". The essence of it is that the

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[18] ORACLE White Paper – Information Security: A Conceptual Architecture Approach, 2011. p. 25.

[19] Source: https://iasme.co.uk/cyber-essentials/about-cyber-essentials/ (downloaded 25 May 2020)

organization performs self-assessment based on five core security check-points, and subsequently the information provided is evaluated by the auditor. The self-assessment of the can be achieved quickly and easily through a secure platform.

**Final thoughts**

Today, we have reached a status where attacks aimed at obtaining information and business data are conducted with such sophistication and finesse that countering them seems next to impossible. While we cannot prevent every incident, we can still control, manage, reduce their after-effects, and exercise response processes to some degree. This is aided by information security recommendations, information security standards, enterprise security measures, and security tools issued by ERP software system vendors that can be understood by today's device systems, without which we would be vulnerable.

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