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CONTENT

#NETGAME – NEXT LEVEL EDUCATION: GAMIFICATION AND DIGITAL TEACHING METHODS FOR THE GENERATION OF TODAY

VIRTUAL REALITY: NEW MEDIUM FOR TRAINING PURPOSES

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Abstract:
The use of video games, interactive tools and technological platforms for educational purposes has become a major trend in contemporary society. Research has shown that the gaming component has a major implication on a student's learning process, supporting intellectual, emotional and social wellbeing. (Kiryakova et al., 2014). Is this the same for professional training? To what extent can these techniques be applied to train security forces – i.e. Law Enforcement Agencies and Intelligence Agencies? This article analyses the potential of Blended Virtual Reality Solutions to train professionals in the security sector, showcasing the VR training experience developed by Rex Te.ch. in cooperation with Agenfor International within the EU-funded project JSAFE (Judicial Strategy Against all Forms of Violent Extremism in Prison, Grant No. 763714), designed to counter radicalisation processes in prison and to enhance situational awareness.

Keywords: *Blended learning model, Virtual Reality, Netgame, prison radicalisation, digital forensics, situational awareness*.

Introduction

Contemporary society continuously faces a technological revolution that includes, among its milestones, the introduction of the World Wide Web and its infiltration into our everyday lives, the universal mobile accessibility, the Internet of Things and, lastly, the application of artificial intelligence to develop new technological solutions (Feki et al., 2013). The advent of the pandemic (COVID-19)

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accelerated this process, and it underlines, as Fish (2020) stated, that "the evolution of technologies is no longer an option, but rather the only possible choice." Among other technological solutions, the last decade has witnessed an exponential growth in the use and development of Virtual Reality (VR). In fact, VR has now found a place of honour alongside influential media such as telephones, the Internet or television – its uniqueness reflects in the fact that it merges many technologies into one single medium (e.g. computer, head-mounted display, headphones, motion sensor, space detection cameras) making it adaptable to different contexts and uses (Tubul-Lavy and Bianchi, 2020). Specifically, VR has been used and experimented as a learning tool. In education, VR has been found to be beneficial for four main reasons: (1) it enhances the performance and trainees' focus; (2) it turns mistakes into opportunities to learn; (3) it allows a customisable experience; and (4) it extracts beneficial data (Tubul-Lavy and Bianchi, 2020, p. 8-9). The benefits are often intensified by the fact that VR includes a game-factor that has shown to enhance the learning process. (Tubul-Lavy and Bianchi, 2020, p. 8-9).

This article argues that VR is undoubtedly beneficial for educational purposes and will demonstrate this by analysing the case of training that targets adult professionals in the field of security. In fact, Law Enforcement Agencies (LEAs) often appear to lack sufficient experience to carry out their tasks properly due to the structural criticalities of their job, the high-risk scenarios they often encounter in their daily job, and their job schedule – which do not allow them to spend a significant number of hours in training. In order to support this statement, this paper first analyses the advantages of using VR for training purposes in general terms and compares traditional learning methods to VR-based methods. Secondly, the authors describe the training experience of Rex Te.ch in cooperation with Agenfor International within the EU-funded project J-SAFE (Judicial Strategy Against all Forms of Violent Extremism in Prison, Grant No. 763714), which used a recently developed VR prototype to train LEAs, including intelligence officers, on the prevention of radicalisation in prison and situation awareness. Finally, the importance of using innovative

technologies combined with VR, in order to support improving intelligence analysis and training analysis methods is outlined.

In the interest of academic accuracy, before continuing, it is worth clarifying the terminology used in this paper. Virtual Reality (or VR) refers to an environment that isolates the users from the real world, influencing their emotions through tools such as graphics, motions, and sounds, among others. As Martín-Gutiérrez et al. define it, it is a "whole simulated reality, which is built with computer systems by using digital formats. Building and visualising this alternative reality requires hardware and software powerful enough to create a realistic immersive experience" (Martín-Gutiérrez et al., 2017).

Serious gaming relates to games and video games that are applied with the aim of achieving a given strategic objective (Zyada, 2005). Serious gaming identifies new categories of both information gathering and knowledge acquisition, combining games with serious educational purposes. The innovation of the serious gaming concept is that games are used not only for entertainment, but rather for education and teaching purposes. Another important term is machine learning, which refers to a method of data analysis that automates analytical model building. It is a branch of artificial intelligence based on the idea that systems can learn from data, identify patterns and make decisions with minimal human intervention. An advanced machine deep learning keeps learning independently based on previous results and stores the data for later use, like a human brain - this is the reason why we also call machine learning a neural network (SAS, 2020). Finally, the Blended VR Solution refers to a new method of delivering training, in which innovative Virtual Reality solutions are adopted and combined with online synchronic and a-synchronic lessons, so that the learning-by-doing approach can be exploited in a wider frame of the learning process, adapting to different needs and sectors (Tubul-Lavy & Bianchi, 2020).

The paper adopts both a qualitative and quantitative approach that illustrates the value of using VR as a training method. Authors have relied on a variety of sources to research this topic, predominately including primary academic papers as well as newspapers. In conjunction to this, part of the article includes the authors' first-hand

experience in developing a VR training tool and relies on the training assessment data developed by Agenfor International in order to show the possible benefits of VR in the security field.

Virtual Reality Advantages and Disadvantages

When it comes to Virtual Reality as a new medium, it can be considered a new world that can be interfaced with other technologies in order to get added value. The hidden possibilities in Virtual Reality and the features that are added to the technology every year herald the users the unlimited potential of its application. With the advancement of Virtual Reality technology, especially in the last decade, we have witnessed significant improvements, such as device size reduction, resolution improvement, home computer interfaces, wireless content broadcasting, mainstream accessibility, accessory interfaces such as ARDUINO (more info can be found in (Barrett, 2012)) and audio accessories like Woojer - which offers a sensation solution to feel the music based on forced feedback in low frequencies. Recently, significant upgrades have also been observed, such as eye-tracking, hand tracking, adding a sense of smell and collecting a range of biological data, such as EEG (electroencephalogram), pulse, blood pressure and much more.

All of these can be bundled into one device that can be used in order to implement advanced Artificial Intelligence (AI) systems. The combination of VR and AI can even break the boundaries of the imagination and create intelligent environments (Luck et al., 2000) that will evolve over the years. Machine learning, as part of the AI process, can create learning environments that evolve on their own - for instance, where a virtual environment changes depending on the specific person using the Head Mounted Display (HMD). A similar form of machine learning is used in the field of internet advertising, in which information about users is collected, processed, and, as a product of this, a relevant advertisement is displayed for that user.

Moreover, as briefly outlined above, VR is beneficial for training and education purposes, especially when used combined with the serious gaming component. Serious gaming allows the users to complete tasks and achieve results within the virtual environment, by competing with each other and by putting theory into practise in a very

quick and dynamic way. Indeed, research and experiments have shown that the learning-by-doing approach provided by VR, as well as the high level of engagement of the trainee, are to be considered essential in the learning process, and they allow a higher level of performance, if compared to more traditional ways of teaching (Lesgold, 2001).

Four main characteristics of the benefits of VR and serious gaming should be highlighted in greater detail. Firstly, VR enhances the performance and focus of trainees. In Oculus (2019), Connect Isabel Tewes presented an experiment, involving two participants, asking them to perform the exact same task (performing the same medical surgery). The first participant was trained to perform the task with traditional manual guides and use of VR simulation, while the second one was instructed with traditional manual guides only. The virtually guided participant took 50% less time to perform the task and, crucially, did not require the assistance of a professional, while the traditionally trained participant frequently required assistance, and performed the task with lower results than the first participant. In the same presentation, Tewes (Oculus, 2019) demonstrates how VR can enhance learning and collaboration, explaining how performing a collaborative activity within virtual reality centralises most activity in the shared space without distractions. Tewes described car designers who were able to complete an assigned task in 20 hours of activity, which would otherwise usually take many months.

Secondly, VR turns mistakes into opportunities. Making mistakes can be a fear of any trainee but VR allows each trainee to attempt tasks and fail and, by doing so, to explore different ways of solving a problem without having to overcome the consequences as in the physical world. In the virtual world, it is possible to make mistakes that otherwise may cost injury, damage, and even death in the real world (Wang et al., 2018). This way of learning offers relief for the trainees and strengthens their creative side. At the same time, the use of VR is a strength for the trainees as they feel committed to reality, and as such, they make decisions in real-time, which makes them experience the situation as if it were real (Kahn et-al., 2018).

Thirdly, VR allows a customisable experience. As emphasised by Masie (2017), VR has the ability to personalise the learning experience -

as the trainee's control and change the environment from their own perspective. This allows the trainees to choose the speed with which they acquire the knowledge and adapts the course to their own preferences and needs. It also offers methods of handling and adjusting content according to the feedback provided by the users and thus the content can change automatically and repeatedly. It is possible to determine a range in which the content changes according to the operator's decision and thus also allows the situation in the learning process to be made more difficult or easier (Donga et al., 2020).

Finally, one of the greatest advantages of VR is that it allows operators to produce quantitative analysis and statistical data beyond qualitative analysis. Tools such as eye-tracking, biofeedback accessories for measuring sweating, blood pressure, and heart rate, and even Electroencephalography (EEG) devices provide data that can be extracted from the process and create feedback to improve the products. Eye-tracking systems make it possible to objectively examine game times and sources of fear in VR (Reichenberger, 2020).

The gaming factor is also worth underlining. Indusgeeks (2019), a specialist in game-based training, explains that gamification is a key training tool and that, from a trainer perspective, VR training saves a significant amount of money and resources, while also streamlining the organisation. VR training brings real value as an educational tool and offers a comprehensive solution for the entire training chain. In the learning process, the organisation has lower costs both in terms of infrastructure and in the cost of training time, as well as requiring fewer staff members to implement and support it. The trainers are free to distance themselves and assess the actual training process since the process is run automatically in VR and thus the trainees can lead themselves with the help of guidance from within the virtual world. The quality and efficiency of the process improves the trainee's level of enjoyment and shortens the learning time, enabling more knowledge to be transferred in a shorter time. Crucially, these benefits raise users' satisfaction with the whole process and offer a more accurate and often faster service.

In conclusion, through their technical capabilities, VR and serious gaming reinforce and enhance the purposes of the training and,

in many respects, grant users certain benefits which would not be possible using more traditional ways of teaching and learning. Furthermore, using the data we can gather through the Machine Learning process, we can even control the level of immersion of the participants and influence their performance while monitoring objective metrics and changing content in order to influence these metrics. It can also allow players certain abilities in the experience if they succeed to control their physiological metrics. These are interactions that cannot be controlled in most of the existing media, placing Virtual Reality as a unique medium with the highest monitoring and control capabilities (Houzangbe et al., 2020).

Thus far, the authors have outlined the benefits and the potential of VR, but as a new technology, it has to overcome several obstacles and risks. First, testing a new technology that is unfamiliar to the users can create deterrence and a reluctance to face a new challenge. Most often, older generations tend to use technology that is familiar and convenient for them, as opposed to new technologies, which younger generations tend to be more open to. This may be an obstacle to implementing Virtual Reality in older organisations in which trainees are of a higher average age.

In addition, compared to the training performed so far in the physical world, developers must overcome the challenge of creating realistic environments that behave in the same way as reality in order to attract users to use Virtual Reality. Furthermore, the timeframe that can be spent in an immersive experience is limited and breaks are sometimes necessary in order to allow the user to re-adjust between activities. A large amount of *stimuli* on the human brain, the considerable use of screens, and sometimes even discomfort in wearing a helmet can affect the experience.

Finally, unlike in the real world, the likelihood of technical glitches is high during the practice of a virtual environmental scenario due to the technical complexity that accompanies the desire to give the user the most immersive experience. For these kinds of experiences, the developers may use a number of technologies, including the Virtual Reality system or cloud systems, as well as interfaces for Haptics accessories such as sensors or distance sensors - as used by the

developer of Agenfor International's VR training prototype, examined in the following section of this article.

Case study: Rex Te.ch and Agenfor International's VR training prototype concerning prison radicalisation and scenario awareness

Within the framework of the EU-funded project J-SAFE (Judicial Strategy Against all Forms of Violent Extremism in Prison, Grant No. 763714), a VR training prototype was developed and tested to support LEAs into two areas of the prison administration that were found to be crucial for the staff: countering processes of radicalisation within prison – including conducting digital forensics extractions and analysis – and scenario awareness for training activities.

Implementation of the Case Study

The first topic, training on radicalisation, was conducted due to the fact that prisons seem to be among several potential hubs for indoctrination and proselytism (Basra and Neumann, 2020). In fact, in the prison environment, crimes and violence are normally more usual than in the outside society and personal grievances result from rigid contextual limitations. As a consequence, in prisons it is easier for extremist individuals to exploit radicalising agents in order to recruit and indoctrinate more vulnerable subjects.

Together with threats existing within prisons, there are also risks coming from outside the walls of the prisons. In fact, it is very common for external objects, such as mobile devices or USBs, to be smuggled into prisons by external visitors or even by drones (Il Messaggero, 2020), allowing the inmates to get access to further contraband and contacts. This does not only enhance the process of radicalisation, but also allows the potential continuation of inmates' illegal activities outside the prison facilities. This phenomenon is spreading worldwide, as mobile and digital tools are becoming essential in pursuing illegal activities and increased access to small and silent drones is making smuggling operations even easier and less risky. These new technological changes require very careful attention and

readiness on the part of the penitentiary staff, who are asked to face new threats, look at new e-evidence and collect new data.

Based on the reality outlined above and acknowledging the importance of the prison system in the realm of security and prevention for countering radicalisation, it is extremely important that the prison staff and the penitentiary administration be put in the position to understand this phenomenon and, consequently, react to and prevent potential violent acts inside and outside the prison walls, ensuring a safer and more secure society.

In recent decades, in order to ensure a high level of readiness by the prison administration to counter such delicate and continuously changing phenomena, several training courses for prison staff have been developed, aiming to raise awareness and to help detect potential indicators of crime and evidence as fundamental components of the preventive measures.

In the case of the J-SAFE training, the VR component aimed to supplement the more traditional way of teaching and learning, offering an enhanced experience which improves the overall objective of the course and lets the participant experience an immersive learning by doing approach. The Virtual Reality modules were built upon a highly realistic reproduction of real environments, where LEAs and prison staff can enter into the simulated scenario and analyse the behavioural changes of a fictional character by monitoring, analysing and performing several tasks and activities. The use-case scenario used within the training of the J-SAFE project has been built upon 10 different real cases of radicalisation in prison and upon the knowledge acquired through research activities within the framework of several EU-funded projects. The training approached a sensitive and dynamic topic, and therefore, it applied a direct and active involvement of the trainee, by fostering an understanding of behavioural and violent dynamics and by analysing the processes of human behavioural changes, based on the well-known psychological exploration of the staircase to terrorism from the criminologist Fathali M. Moghaddam (2005).

In addition to the theoretical course on processes of radicalisation in prison, the penitentiary staff were equipped with basic knowledge on the importance of digital and mobile forensics, especially

when dealing with crimes such as international terrorism and other serious crimes. In this regard, the Virtual Reality solutions simulate the environment for conducting a prison search, allowing the trainee to enter into a recreated virtual cell, looking for a hidden mobile device. As soon as the trainees find the illegal device, they are asked to perform a series of actions to maintain the integrity of the data on that device, as the first and most important part of the digital forensic procedure. To gain a deeper understanding of the forensic procedures for mobile and digital extraction, the Handbook for Prison Police and Security (Bianchi, 2021) has been drafted within the above-mentioned project J-SAFE.

The training courses were developed using a highly interactive virtual platform, called a Multiplayer Platform (MP), which allows users to interact, communicate, watch videos and presentations, grasp and look at virtual objects, perform tasks and compete against each other, while being in the same virtual room, even if physically in different geographic locations. This particular characteristic of the MP Platform showed itself to be extremely helpful in the time of COVID-19, helping participants to overcome restrictions to travel and participation in international training activities, or when social distancing is restrictive, and therefore the access to the prison sector is limited.

As part of the training process, a dedicated team was established, consisting of content developers, integrators, representatives from LEAs and training developers. The development of the course was carried out on the basis of Virtual Reality technology and made use of the appropriate equipment supported by a computer for visual processing. The training system was a starting point for saving resources in the training process, improving the system mobility and performing training anywhere outside the prison walls, offering the ability to perform training in several different geographical places without spending too many human resources (as the training was performed mainly in Virtual Reality) and, above all, improving the trainees' learning ability with a learning-by-doing approach.

In order to create a more realistic encounter within the experience, each participant has an avatar representation based on real facial features of the participant. A communication channel is opened through the Virtual Reality device so that participants can communicate

and talk to each other. During the activity, the participants were able to interact with each other by moving and passing objects in the virtual world and discuss the tasks they were required to perform in the virtual environment. To enhance this further, serious gaming was used to demonstrate and employ investigative and forensic tools in the learning environment and promote competitive learning among the participants. The system was built with advanced cloud technology that fully complies with the data privacy regulations of the GDPR. The developed platform is an important tool which helped us in dealing with the current pandemic situation and allowed us to continue training activities despite it. More crucially, it allowed us to reap all the benefits of quality experiential learning and further exploit the machine learning and artificial intelligence analysis, which will allow further boundaries to be broken and improve the user experience.

Methodology applied and results

In order to evaluate the VR training prototype, a very structured methodology has been followed. While the training itself covered a broader number of European countries, only the case of Italy is here analysed in detail in order to give a quantitative assessment of the prototype developed.

In terms of demographics, 36 Italians participated, mainly males between 45-55 years old with more than 20 years of experience in their job. For most of them it was the first time they experienced VR in their life. All Italian professionals were prison staff, both from the prison police, prison intelligence and administrative staff.

In terms of evaluation, 21 professionals over 36 completed the evaluation questionnaire. Despite having no or little experience with VR, 76.19% of the participants found VR more beneficial than traditional training and positively evaluated the increase in interaction, focus, engagement and entertainment, as well as the variety of scenarios and the involvement in real-life environments often difficult to test in normal training (i.e. training in prison cells).

In terms of usability of the technology, 60% of the participants found the technology easy to use. Nevertheless, all the participants

agreed that the content and course structure were easy to follow and all stated that the content will help them professionally.

While the case analysed is small, results are very positive and so far the VR technology developed can be considered successful and should be taken as a first step toward innovative and effective trainings in the field of security.

VR in the security sector: Situation Awareness Measurement

So far, the authors have discussed solutions for LEAs, targeted towards penitentiary staff in order to assess and monitor radicalisation processes that lead to violent extremism, using VR solutions. In this section, the use of such technologies for measuring scenario awareness through VR and Machine Learning will be outlined and how innovative technologies can be of support in improving intelligence analysis and training.

The term situation awareness is described by Endsley as a state of knowledge resulting from "the processing of elements in the environment within a volume of time and space (Level 1), the comprehension of their meaning (Level 2), and the projection of their status in the near future (Level 3)" (1995). In order to achieve a high level of situational awareness, it is essential that the operators gain enough experience to properly react to different emergency situations, and therefore they must combine high focused training with operational experience.

The VR has the potential to combine these two essential elements into one single action: in fact, by training operators through VR, they simultaneously receive the necessary level of training on the one hand, but at the same time, as an immersive and highly engaging tool, it also allows the recreation of different scenarios and implementation of acquired skills in dynamic and emergency situations.

VR is majorly effective when used as an alternative for situations that may be considered dangerous or critical, or even impossible in real life (Strickland, 2010). If we think about fire emergency training done in a traditional way, compared to that done using VR, we suddenly understand the huge impact this innovative technology may have. In fact, traditional training does not consider that people react very

differently if under stress or facing dangerous and unstable situations. VR training, on the other side, lets the user train in a real-situation environment, where trainees are able to sense fear, fire, and disorder, and therefore, they react as they would react in a real emergency situation (Macedonia, 2002) while avoiding the complications, the costs, and the danger linked to a real simulation.

The virtual simulation allows the trainer to understand what to avoid and how to better address the risks related to the specific crisis while also allowing the trainees to focus on and analyse their reaction and the dos and don'ts, in order to be more prepared in case of real emergency. Similarly, it is possible to re-create riots in virtual environments, which can be used by LEAs to better address their reactions in conflict situations of social unrest. Again, a virtual simulation of a riot lets the agent sense the dangers around him/her and therefore, to train on how to immediately and correctly respond to it. Furthermore, these kinds of training increased the user involvement, thanks to the aid of tools such as motion detectors, virtual reality, controllers, and interactive multiplayer platforms (Baur et al., 2018).

Last, but not least, it is important to mention the machine learning component and the analysis of data. As briefly stated before, being trained in a Virtual Reality scenario allows the trainer and trainees to gather several data in order to better focus the analysis afterwards and therefore, to better implement training activities and situational awareness. The tools mentioned in the previous paragraphs of this paper – such as eye-tracking, biofeedback accessories for measuring sweating, blood pressure, and heart rate, and even EEG (Electroencephalography) devices – provide data that can be extracted from the process and can be used for understanding criticalities and risks, but also strengths and weaknesses of the trainees.

This characteristic should be considered deeply valuable, especially when training Intel agencies and measuring situational awareness. It should be additionally considered that, sometimes, training in the field is not possible due to the high risks associated with them. The recreation of the scenario through a virtual simulation supports LEAs in familiarising themselves with hostile environments, without putting themselves in danger. The use of VR in the security

sector should be seen as highly beneficial, but it is still in an initial phase and empirical research must be further developed in order to see the results on a significant scale. The security world is moving in this direction and it is upgrading and adapting its technologies in order to be competitive and ready to confront the new challenges in security today and in the future.

Conclusions

Based on the analysis and examples provided in this paper, it can be stated that new technological solutions, such as Virtual Reality, combined with machine learning and serious gaming, can and should be used to train practitioners and professionals in the field of security (especially targeting Law Enforcement Agencies and Intelligence Agencies).

Looking to the future, the use of these technologies for training purposes, will become an essential component of the system for the development of information gathering and analysis through machine learning. Systems of this type will be able to give us a high level of prediction adding value to the training process and assess and measure situational awareness in a proper way, and even adjust certain content according to the analysis obtained. Based on the measured parameters it is possible to create corresponding situations in Virtual Reality – for example, radical prisoner encounters with positive religious leaders, enhancing positive interactions, and much more – aiming to support not only the training and learning process, but also to build a safer and more secure society. The authors believe that already existing systems with proven knowledge and experience from tangent fields will form a mature ground in the implementation of such systems. Beyond that, in this time of COVID-19, when human contact is reduced to the minimum, VR technologies are of added value in keeping the training and the trainee active and engaged, while also allowing people to meet and interact virtually, avoiding the potential spread of virus that we may encounter in the physical world.

Especially for LEAs and Intelligence Agencies, the application of virtual reality in training is of central importance in order to contribute to security, counter-radicalisation and situational awareness strategy

activities. An important and additional value arises from the ability to host joint training between forces in different countries, fostering knowledge sharing and avoiding unnecessary travel and expenses.

Furthermore, the authors believe that, with each passing day, the world is exposed to new technological capabilities that will require us to learn and effectively adopt them and, of course, apply them to existing systems in the most strategic way possible.

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#COVINTELL – CORONAVIRUS AND THE INTELLIGENCE SECTOR – HOW PANDEMICS SHAPE THE SECURITY STRATEGY DEVELOPMENT PROCESS WORLDWIDE

HEALTH CRISIS – BEYOND UNCERTAINTY AND CHALLENGES

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Abstract:

On 31 December 2019, the World Health Organization - China Country Office was informed about pneumonia cases of unknown aetiology (unknown cause) detected in Wuhan City, Hubei Province of China (WHO, 2020). That was the beginning of a new health crisis, with subsequent global effects.

This crisis exceeds the analytical capacity of health experts and finds society completely unprepared to put in place interdisciplinary teams capable of making complex analyses or epidemiological models with successful prognosis, applicable to concrete realities. At the same time, significant changes are expected, but many pieces of the puzzle are missing, which is why, it is difficult to map out projections outside of subjective assertions, generalities or wish list elements.

In a time of great uncertainty, following the underlined aspects, which would be the most appropriate reaction of the analysis and prediction community? Which are the changes generated by the COVID-19 pandemic and which are the challenges that humanity will have to adapt to? How predictable are these changes and how durable will they be?

Keywords: *Health Crisis, Uncertainty, Risk, Scenario Analysis, New World Order*.

Introduction

The uncertain dynamics of 2020 indicated so far that the main effects of the pandemic have been to deepen and to accelerate the erosion of the global geopolitical balance and to disturb some defining aspects of the world order. Unlike its precursors SARS and MERS (WHO, 2015), SARS-CoV-2 (WHO, 2003) is more contagious than the viruses that cause seasonal flu and it can be spread much faster by the people

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who have no symptoms (asymptomatic), even from the initial stages of incubation. SARS-CoV-2 can also last from two (2) hours, up to nine (9) days on almost any surface or material, as well as in the air, on particles or suspensions (Kampf, 2020).

After the COVID-19 outbreak, the first response of the states was to set up unilateral bans, lockdowns and to strengthen national borders (Dunford, Dale, 2020). At the same time, under the influence of the pandemic, nationalist attitudes, questionable measures launched by the states and various accusations regarding the responsibility for the pandemic, supported by extensive disinformation campaigns, came into light.

Furthermore, criticism of the United Nations or the World Health Organization, led to the erosion of confidence in the international institutional framework (European Commission, 2020). Moreover, military activities in North Africa, the Middle East, the Black Sea area or the South China Sea demonstrated that the pandemic has not reduced conflicts, tensions or projections of military force.

This reality, forced the analysts tasked with making forecasts and estimates for national security risks, to substantially change the way they defined uncertainty. In this context, the analysts need to accept the climate of uncertainty and then must identify, under the condition of *coherence and objectivity,* the known and unknown elements of the equation. Hence, in order to provide some coherent, relevant and comprehensive intelligence products that reflect as clearly as possible the new realities, analysts should be able to separate reliable evidence from doubtful one, their mixture being unproductive.

The methodology used to draw up the findings of this article, follows specifically the descriptive side of predictive activities in the field of intelligence analysis. Hence, in order to clarify the subject, this research used the logical method, which represents the application of analysis and synthesis procedures, deductive and inductive argumentation, as well as the identification of causal links that make possible the explanations of the situation in terms of cause and effect.

This approach made it possible to highlight the most distinctive characteristics of the evolutions, noticed in this worrying pandemic situation generated by the SARS-CoV-2 virus, and then the related conclusions could be drawn.

Uncertainty Followed by the Crisis

First of all, the coronavirus pandemic started unexpectedly and spread virulently worldwide, but the experts must admit that this health crisis is not a *Black Swan*, but a *Game Changer (*Toderean, Celac, & Scutaru, 2020, p. 22) and more than that, experts must recognize that, there have been a number of indicators and other important data from past epidemics, which have been knowingly ignored.

Why this potential hazard has not been taken seriously into consideration in the risk estimates?

According to practical procedures, in most mathematical matrices used in risk analysis (Bizadea & Andrei, 2015, p. 63), as well as in *National Security risk estimates*, *the threat called epidemic (or pandemic)* was passed in the area that *is always given the least attention* and, implicitly, *the lowest resources*: *the one that brings together, threats with low probability of manifestation and relatively low impact.*

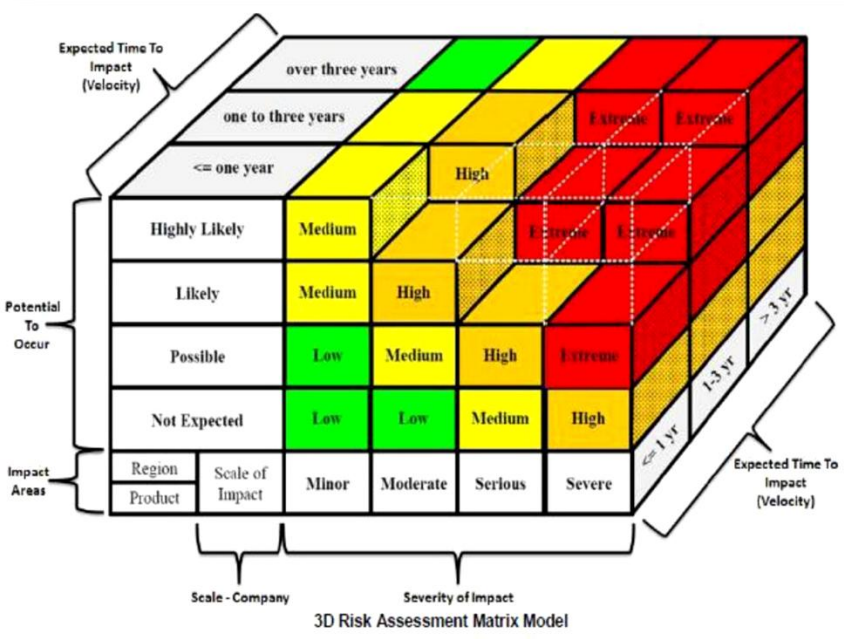

Figure1: 3D Risk Assessment Matrix Model
(Source: Bizadea & Andrei, 2015, p. 63)

The decision-making process on security matters always focuses on high probability threats, with high impact, rather than on those with a low probability and high impact. In this context, it is impossible to predict the occurrence of a pandemic in a time-space relationship, or to estimate its duration and effects, especially since humanity has not faced many epidemics or pandemics in the recent past, so that they could be taken seriously at the present time. Following these clarifications, *the risk analysis* fundamentally places the issue of *predictability* in fragile territory located between certainty and uncertainty.

On the one hand, *in stable contexts* it is relatively easy to predict what is going to happen and especially what is not going to happen, so relatively slow changes or evolutions are easy to predict and understand. Hence, understanding a change and the ability to predict it are, in fact, a function of understanding the generative causes, in a cause-effect equation. *In conditions of relative stability when only a few things are changing, a moving element is relatively easy to be perceived and extrapolated.*

On the other hand, this is exactly what is not happening in a crisis. By definition, a crisis is unforeseen, with disproportionate effects and unintelligible causes. In crisis situations, too many things are moving, evolving and changing, so the effects of all these changes are much more difficult to understand.

In this context, it is time for policymakers to support and consolidate the culture of strategic intelligence which should be promoted under the famous expression of Peter Schwartz in *The Art of the Long View*: "What has not been imagined, will not be foreseen (…) in time." (Schwartz, 2012)

Uncertainty integrated into Early Warning Systems

In Strategic Intelligence (Toderean, Celac, & Scutaru, 2020, p. 398), uncertainty can be used as a methodological principle. Thus, the territories of uncertainty can be linked with those areas where clear data, regularities and intelligence can be identified. For example, in the Scenario Analysis Methodology, integrating different types of reasoning elements can bring cognitive pluses and applied conclusions.

Scenario theory assumes the existence of at least two alternatives that must be created. Thus, the distinction between scenarios and predictions appears, the latter being a linear development of a known, present situation.

According to the following experts, predictions are in fact an option, which is given the highest degree of probability chosen by the analyst from a multitude of scenarios, or, as Liza Krizan states, predictions are those hypotheses that have been *"accepted"* as the *most probable* among *several competing hypotheses*, based on the available data (Krizan, 1999).

However, Charles Doran explains that predictions, unlike scenarios, *"fail in the end because they do not develop any technique to anticipate an event when nonlinearity manifests itself"* (Doran, 1999). Therefore, *Scenario Analysis* is not just a theoretical exercise, but a complex simulation that can lead to better decisions in the long term.

I. Nitu, a well-known expert and local educator in the field of intelligence, claims that: *"In Scenario Analysis Methodology, when setting up scenarios, there must exist flexibility and openness to new atypical approaches, because when you fight against unpredictable enemies you cannot manage the situation using traditional methods.*

To meet these challenges, intelligence analysts must constantly change their approach in order to regard reality from multiple angles and also future generations of analysts must be prepared to cope better with future risks. It is necessary that Scenario Analysis Methodology and simulations be introduced as standard procedures in the practical activity of intelligence analysts. The future belongs to the futurists as long as they will be integrated into analysis teams ... the future belongs to both science fiction authors and directors, as well to screenwriters, who should be regularly consulted by analysts. " (Nitu, 2018, p. 226*)*

Hence, *Scenario Analysis* can be a suitable method by which a coherent intelligence product can be achieved, by integrating data, analysing information and increasing the area of knowledge. More than that, scenario theory states that if scenarios are correctly identified, based on measurable indicators, enabling factors or inhibitors, then intervention can be made in advance, in order to maximize the likelihood that favourable scenarios will occur.

With regards to the Coronavirus (COVID-19) situation, it must be acknowledged that many elements of this crisis (social, economic or geostrategic) are only revealed now, but they originate from pre-pandemic developments. This is one of the reasons why intelligence analysts need to identify ways to integrate the uncertainties of the present into a normal evolutionary framework. When there are conditions of uncertainty, one of the great virtues of the scenario analysis is that practical modelling can be done for different periods of time.

Scenario Analysis is among the only few possibilities to exploit the future marked by uncertainty. Therefore, this practice offers the possibility to map out mutually exclusive scenarios in the short, medium and long term. The debate on current uncertainties leads to different scenarios for the future; thus, accepting uncertainty means being aware that there is no certainty about future developments. More than that, Scenario Analysis allows several divergent points of view to be integrated coherently; in this way the diversity of perspectives becomes an obvious plus, which enables the revelation of some important elements and structures of the future.

Finally, after the narratives are introduced in the decision plan, all the indicators underlying those scenarios must be identified and their evolution must be monitored.

Basic steps in Scenario Analysis Methodology

Scenarios Analysis is a useful technique for exploring the many ways a situation might evolve, anticipating surprise developments, and generating field requirements when dealing with little concrete information and a highly ambiguous or uncertain threat.

Scenarios Analysis is a systematic method for brainstorming multiple explanations of how a situation may develop when considerable uncertainty and several underlying key drivers are present.

The basic steps are:

1. *"Identify the focal issue either from intelligence requirements or by interviewing experts and officials who are most knowledgeable about the topic.*

2. *Generate a list of forces or factors that will influence how the situation is most likely to evolve. From these, identify several key driving forces. It is useful to have several experts participate in the creation of these key drivers.*

3. *Define the two ends of the spectrum for each driver.*

4. *Pair the drivers in a series of 2 x 2 matrices.*

5. *Develop a "story" or two for each cell of each 2 x 2 matrix.*

6. *Select from all the generated scenarios those most deserving of attention because they illustrate compelling and challenging futures not now being considered.*

7. *Refine the list of key drivers.*

8. *Develop indicators that could be tracked to determine whether the selected scenario is or is not developing.*" (Pherson, 2018)

The technique can be illustrated using the question: "What is the future of (…)?"

The new world order, challenges and social resilience

The reality is that this health crisis generated various changes, which imposed a new state of normalcy. Thus, this new situation requires a comprehensive identification of risk developments with high probabilities of materialization, which can be assessed in a timely manner by analysts in a scenario analysis.

Currently, many changes that emerged from the pandemic phenomenon can be noticed without too much effort, but others can be only vaguely intuited. Moreover, the magnitude of these changes (psychosocial, economic, geopolitical, and not only) will be directly proportional to the duration and intensity of the pandemic (Toderean, Celac, & Scutaru, 2020, p. 498). As a result, the signals of these changes can become favourable conditions for any actions that could increase the resilience of human society.

So, if we agree to define resilience as the ability of an individual, group or society to develop effectively and continue to project itself into the future, despite all the destabilizing events or difficult living conditions, sometimes even severe traumas, then, there are many encouraging elements in this conceptual equation.

*A very important aspect is that **if** it is assumed that social resilience has three properties, **the first** being **resistance** which represents the efforts of a social entity to withstand a disturbance and its consequences, **the second** being **recovery** represented by the time required for an entity to recover and **the third** being **creativity** represented by the capacity to adapt to new circumstances and the ability to learn from the unfortunate experience of a disturbance**, then** we must accept and prepare to meet the random nature of major crises and we must also understand that the illusion of complete foresight is dangerous!*

Even though humanity is not yet ready to manage the uncertainty in social systems, this crisis provides an opportunity to change many of the habits that have become entrenched over the time. Among the changes already visible are those that come from the medical/sanitary and emergency management systems, which are obviously designed for peace and stability.

In future wars, perhaps with even more dangerous viruses, the international community must be prepared to identify from early time the viruses or strains of lethal viruses. This could effectively control the situation in advance, and reduce the outbreaks of infection. Antidotes and treatments could also be produced more quickly, and modular or temporary hospital units could be set up faster than usually.

More than that, adequate preparation could considerably improve the capacity of production for sanitary equipment and medical materials. Additionally, an anticipatory preparation would allow the early construction of reserves and stocks.

It is necessary for doctors, virologists, epidemiologists and biologists to become an integral part in the state decision-making process and for the civil society, through information and awareness, to acquire minimum knowledge and skills related to epidemiological protection and prevention. More effective awareness campaigns could also be launched and run in a timely manner, in order to limit the spread of the unwanted side effects. Health diplomacy must become an inherent component of classical diplomacy and defence ministries must set up departments to deal not only with biological or nuclear weapons, but also with epidemics and/or pandemics.

To meet all these challenges, intelligence organizations should develop MEDINT (Toderean, Celac, & Scutaru, 2020, p. 22) (Medical Intelligence) capabilities alongside the classic OSINT, HUMINT and SIGINT, in order to ensure their early-warning function, to know in advance and to anticipate the occurrence of such potential health crises.

The confrontations in the sphere of informational and psychological warfare did not stop under this health crisis and the context generated by this phenomenon has represented a fertile ground from which conspiracy theories, fake news and misinformation campaigns have emerged and have been highlighted with unprecedented intensity for the last thirty (30) years. Beyond the inherent temptation of the people to believe more easily such stories in times of crisis, uncertainty and anxiety, it should be noted that some false narratives have been deliberately created or amplified by state and non-state entities.

Also, one of the main challenges generated by this health crisis is the growing trend towards de-globalization in favour of nationalist and protectionist approaches. During this crisis and in the following period, the anti-globalist, populist and nationalist tendencies are expected to intensify.

Most likely, such attitudes will continue to expand and, through more nationalism and more bilateral than multilateral negotiations, the public policies characteristic of each country will determine the way in which the international system will be reformulated (Toderean, Celac, & Scutaru, 2020, p. 88).

In the midst of this health crisis, the possibility of political authoritarianism in excess must be taken into account. This pandemic provided acceptable pretexts for authoritarian leaders to eliminate their opposition as well as to close borders, or reject accusations and accusers from the public debate, based on health principles and other urgent issues. In this category, messages and attitudes of extremist and xenophobic type have emerged already, which blame entire ethnic, professional, or social categories. As a result, it is likely that the polarization of society and the widening of the gaps between different socio-demographic, ethnic and professional categories will be an important challenge for the coming periods.

Reconciliation through broad support and solidarity projects is necessary to avoid political currents that lead to civil disobedience, violation of the law, violence, anarchy and collapse. Against the background of eroding the internal economic and social balances in democratic countries, challenges to political and economic values are also expected.

Moreover, several tendencies can be noticed in the socio-political sphere. Massive disruptions that occur in supply chain flows, in the long-term, could lead to the decline of globalization and a decrease in international cooperation. The relocation of some important industries in different national regions or enclosed to national territory and the imperative to reduce the length of supply chains will lead to an increased intensification of intra-regional trade, compared to global trade.

This phenomenon will also reduce transport distances on the trade routes for the commercial goods, an aspect that will most likely affect, as a consequence, the revenues obtained from the global transport activity. The first important geopolitical questions are: (1) how supply chains will be rebuilt and (2) how commercial traffic nodes will look like in the medium and long term.

By answering these questions, it will be possible to identify how the interdependent relations between the economies of different states will change (Toderean, Celac, & Scutaru, 2020, p. 56). National protectionism could lead to an era of more isolationism and stronger feelings of sovereignty.

There is a high probability that the stringent need to follow and monitor the virus and the host carriers will lead to widespread public acceptance of mass surveillance by governmental agencies. Similarly, it is likely that centralizing efforts to counter the virus will inoculate in the civil society the feeling of accepting authoritarian and powerful leaders much more easily.

Externally, it is likely that migration pressure will increase in Europe and other developed areas, including the United States, due to the fact that populations will flee from underdeveloped countries, less able to withstand the disease and its consequences, including food shortages.

Internally, it is likely that the gap between disposable incomes will widen and richer citizens will be able to afford the best medical care that can be bought, while the less affluent working class will be left to cope as best as it can, with minimal resources.

The erosion of the world order is also foreseen amid the recalibration of economic and military power balance globally. American leadership will lose its influence and tendencies to abandon or challenge the international institutional framework will increase. The exaltation of geo-technological competition between the US and China will accelerate the evolution towards a technological bipolarity globally (Toderean, Celac, & Scutaru, 2020, p. 36). This aspect will be determined by the promotion and dissemination of technological standards (5G, quantum processing, and biotechnologies) of associated products and regulations on their use for the benefit of the citizens and the authorities.

This phenomenon will manifest itself even by imposing conditions in political relations with other states or by assuming a certain set of standards and technologies, respectively by excluding from the market the competitor's technologies. The subsequent effects will materialize in the form of a competition for markets and for influencing major decisions on technological standards in developing countries. The decline in long-term imports, due to the American recession, translates into a recession for the two economic powers, China and the USA.

This would accelerate in both states the ongoing social and political reforming processes. The trade war remains a matter of high importance and perhaps more intense than before the pandemic. Likewise, the way in which China will deal with the economic problems that will follow due to declining exports, will determine its future.

Furthermore, due to the fall in oil prices below the positive level, taking into account the country's budgetary dependence on oil production and sales, Russia is expected to fall into recession sooner than other states, even if the health crisis started late there, according to the local media. This aspect would cause a socio-economic destabilization not only in Russia, but also in the states whose economies are dependent on it, the Central Asian and Caucasian

periphery, respectively. As a result, we will probably witness situations of socio-economic instability in both regions. In the most aggressive scenario, social instability can turn into military instability, which would attract the involvement of other states as well.

Competition and not cooperation has intensified amid this pandemic. Firstly, the race for endowments with sanitary equipment was highlighted in which each nation seemed to act on its own. In the same context, signs of cooperation were rarely observed and, most often, with more bilateral than multilateral values.

At Community level, the main criticisms of the EU have been related to the late activity and the limited effects of solidarity mechanisms. The EU has also been accused of sluggish financial support and lack of proper conditions for the implementation of measures to reduce the economic crisis that will follow in the coming years.

After BREXIT, this was probably the real test for the EU, as the free movement of the population (the Schengen Agreement) was *de facto* cancelled by national decisions, which did not come from the European Community. This is why the European architecture will enter into an extensive strategic reflection process, in order to respond more efficiently, both to the safety and health needs, as well as to the social and economic ones of its members.

In addition, the race of technological endowments with innovative effects and radical implications over international security enforce the need for fast, stringent and exhaustive adjustment of the non-proliferation and arms control regime. More than that, the new dynamics of technological developments will have a remarkable impact in the military field, where the fast progress and increased use of remotely controlled military platforms, so-called aerial, ground, marine or submarine drones, is no longer a novelty. Additionally, the accelerated evolution of autonomous combat systems is enhanced by *Artificial Intelligence*.

Automatic combat systems are becoming a reality and the United States, Russia, and China are making no secret of the fact that they are engaged in the development of hypersonic missiles that will travel with speeds that can exceed ten times the speed of sound and cannot be

intercepted by present missile defence systems (Toderean, Celac, & Scutaru, 2020, p. 122).

Besides, the rise of "new space" technologies simultaneously with their cost reduction and the increase of their availability are evolutions of the "new space" concept and will be accelerated by this pandemic experience.

The high-speed evolutions of space technologies are currently supported especially by the private sector and reflect insight into important sources of profit that lead to a new chase for "gold", respectively a new space race. The main objectives of aerospace industry development aims to support various terrestrial activities and make them more efficient, through space capabilities, as well as through ambitions to exploit outer space for scientific and economic purposes.

This space competition also generates a series of dilemmas and concerns, as follows:

- ✓ *On the one hand*, it focuses on security and sustainability aspects and targets the number of satellites and their exponential growth.
- ✓ *On the other hand*, it pursues the militarization and arming trend of cosmic space.

Therefore, following the trends highlighted above, a stringent need of efforts emerges to establish new rules of conduct, mandatory regulations under an effective regime, in order to ensure the sustainability, stability and security of Outer Space. (3SoS-Security, Stability and Sustainability in Outer Space initiatives, launched last autumn by the EU Special Representative for Outer Space). (Delegation of the European Union to Costa Rica, 2019)

In other words, growing concerns regarding the spread of anti-satellite technologies, cyberspace and outer space, are no longer a secret and are already recognized and addressed as military operational areas. That being said, the international regime of arms control, disarmament, and non-proliferation, require a significant and constant effort to adjust its conceptual delimitations.

In psychosocial terms, the pandemic crisis has forced even sceptics and traditionalists to work in a digital/virtual environment,

which has facilitated the risk of mental overload, as the boundary between work and private life is much more blurred and volatile.

At the same time, the feeling of stress can occur against the background of a compulsive-depressive state of mind, especially in situations that do not involve a simultaneity or precisely structured time schedule. Additionally, the stress feelings are amplified when the team and the work pattern in an organizational framework are missing (these elements are generators of belonging feelings as part of identity).

Moreover, another identified risk arises from fast digitization of educational and economic activities and is represented by a unique increase of cyber-attacks. In addition to data theft, espionage and other dangers, to which all users of smart devices will be exposed, the effects of these cyber-attacks will generate heightened feelings of anxiety and insecurity. So, it must be assumed that a reoriented economy, especially online, will lead to a more vulnerable society to cybercrime, terrorism and mass surveillance.

Following this health crisis, a growing concern can be seen regarding the potential abuse of new technologies, starting from personal monitoring, with smart applications, to many other technologies that can have hidden effects over the human condition, freedom, security and, last but not least, human dignity.

Given these issues, it becomes a top priority to build up a set of procedures, to analyse and report the impact of new technologies on the safety and security of the citizens, as well as to monitor the effects over the system of ethical and moral values and over the rights and freedoms of the citizens. Following new technological developments in the digital field, existing legal framework cannot fully cover the development area.

Although discussions about regulation exists, they are still in the early stages and the questions that arise belong more to philosophy and less to civil and commercial law.

So, these questions will seek to provide an answer to how innovation could be regulated and how new networks and relationships can be built from now on? Moreover, the answers are a matter of greatest importance, especially in the context in which a significant part of the medical system (through telemedicine) and an important part of

the education system (through various e-learning platforms), will be converted and will pass progressively, to the digital area.

In the same digital context, the gap between those who already use modern technology and vulnerable people, who do not have access to it, will grow even more. In addition, given the fact that human resources are essential for maintaining a competitive advantage all over the world, it is very likely that the countries where access to education is restricted for economic reasons will face disadvantages globally, on several different levels.

Similarly, without proper rebuilding and strategic improvement of the economy and civil society, it is probable that the lockdown state, imposed for crisis management, will lead to differences between the rural and urban environment.

Conclusions

There is no doubt that humanity will survive the effects of this pandemic, just as it survived the black plague of the Middle Ages or the Spanish flu which erupted in 1918, but this health crisis will continue to have dramatic effects on human life, as well as significant economic costs.

In the future, it is certain that humanity will face many other epidemics; the only uncertainty is *not whether they will occur, but when they will occur, how long they will last and what effects they will cause.* The results of globalization and growing interdependence have highlighted increased vulnerabilities to such sanitary phenomena. However, scientific advances in medicine and communication place humanity in a more acceptable position than before.

It would also be a gain for humanity if the intelligence analysis community will be able to provide early warning indicators regarding the next health crises that may occur. Moreover, intelligence organizations must adapt their parameters to the new challenges generated by the Coronavirus crisis and to support policy makers with comprehensive and efficient products meant to cover the deficits of transparency, coordination, coherence and sometimes competence. This health crisis has highlighted the structural limitations and

functional failures of the public system, with their potential for multiplication.

At the same time, the crisis underlined the issues of global and national economic and financial resilience and those matters arising from the capacity and resilience of the medical system, as well as the technical mechanisms of crisis management.

The crisis can be seen as a springboard for highlighting and accelerating some pre-existing trends, phenomena, or political relations and thus, in the future, *health security, efficient time management and access to food for the population* will be key variables, which must be seriously taken into account in geopolitical dynamics.

In the end, it is necessary to ask the following questions as topics for reflection:

What is the probability that the next pandemic crisis will occur accidentally (by transfer from animals or due to deteriorating environmental conditions) vs. the likelihood that a future pandemic crisis will be intentionally provoked through biological arsenals in the possession of irresponsible state actors or malicious non-state actors?

The COVID-19 pandemic provided a practical demonstration for any malevolent actor about how much destruction a virus can cause.

What public health and security policies should be adopted to protect humanity?

Will humanity have to give up its freedoms for more security?

Will Privacy + Liberty vs. Security be the next conceptual dilemma?

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COVID-19. THE NATIONAL SECURITY APPROACH

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Abstract:
The paper examines the COVID-19 crisis and its intersections with national security, through the lens of its impact and consequences, as well as of what the security sector can do to alleviate it and how it should treat the remaining concerns. As a former intelligence practitioner, I was particularly interested in an empirical approach to how states and international organizations prioritized the health crisis, when faced with a difficult international security situation, too, whereas tension escalation tended to be, at least for a while, muted, but not erased by COVID.

Keywords: *security, securitization, extended security, cooperation, prioritization*.

Introduction

In President Barrack Obama`s 2015 National Security Strategy, pandemic diseases were identified as threats to national security and hypothetical measures were advanced to increase resilience in this regard. The US announced a global initiative to develop a surveillance and response system for epidemics. The US government had already increased involvement for global capacity-building through the UN and the WHO, as well as through punctual initiatives such as those stemming from the AIDS, Ebola, or avian flu epidemics. But by May 2018, the National Security Council`s (NSC) Pandemic Response Office was being cut, funds for USAID`s infectious disease monitoring activities were severely reduced, and American funds for the WHO were halved.

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In the January – August span of 2019, the US Department of Health organized a series of exercises dubbed *Crimson Contagion*, with a variety of participants among which the NSC, the FBI and US Marshalls, the Department of Interior, and the State Department, as well as the Office of the Director for National Intelligence – ODNI. Alongside the numerous state and federal institutions involved in the exercise, there were also NGOs and private organizations, ranging from those concerned with public health, to important American universities. The preliminary findings of the enterprise, which have never been formally released to the general public by the authorities, were nevertheless made public in a draft report (Department of Health, 2019) that had much to say about the potential response of the global leader to a natural threat of the kind: government and federal authorities had proven to be uncoordinated, lacking in resources – without an adequate view of who is in charge; what equipment is needed; who is responsible for what actions, including for the briefing of high-level policy makers – and unable to adequately aggregate data in order to present them to the general public. Overall, even the US government has been unprepared to deal with such a threat.

In less than a year, COVID-19 hit hard and globally, bringing the US in an unfortunate leading position regarding the total number of cases and casualties. The superpower had, at the end of January 2021, over 26 million positive tests, as well as 440,000 deaths (Worldometers.info, 2021). Neither the warnings following *Crimson Contagion* were heeded, nor actual improvements implemented in order to diminish the consequences of the future pandemic.

In retrospect, many events in history inclined to be more predictable than they actually were, but even without the benefits of hindsight, a global pandemic is by no means a black swan. COVID-19 was only the first truly major event of such amplitude in the past century, after the devastating lessons of the *Spanish Influenza* had almost been forgotten. Recent situations such as the SARS, MERS, Ebola or HIV epidemics did not have the same magnitude, but were, at the time, tell-tale clues of what could happen should an infectious disease prove impossible to contain.

The present paper sets the ambitious goal to examine the impact of COVID-19 on national security, since the epidemic is, in fact, a set of crisis manifesting in all aspects of life. The two hypotheses that we are exploring are: a) how can national security institutions help make the situation better – considering the theory of human security as the core-business of intelligence and in observance of their own legal capabilities; and b) how other national security risks should be approached under such strenuous circumstances.

The research is based on consulting primary sources such as legislation and political decisions relevant to the national security institutions` legal responsibilities; the already generous literature on the subject matter generated by both intelligence professionals, academics and analysts; and the author`s own empirical experience as a long-time member of intelligence upper management, which proved, in many aspects, a continuous crisis-management activity.

Pandemic Consequences

Events such as pandemics are history-altering, if the 1917 *Spanish Influenza* example is any kind of lesson. COVID-19 was probably the main global crisis in 2020 and is still lasting, with significant impact on almost all levels of life as we know it: it impacted health as well as liberty, prosperity and trust. It impacted individuals as well as nations, while nevertheless the rest of the problems did not stand still.

What was different with this virus from the previous ones is a question probably better left to scientists, since it is still a developing story and characteristics of the pathogen are still being discovered. But what probably made a significant difference from previous similar threats was its high infectiousness, the ease with which it spreads from one person to another, the mild symptoms or even complete absence of symptoms for a high number of patients, which make them more prone to avoid quarantine and thus to continue spreading the pathogen.

The overall consequences of the epidemic are rather easy to see and utterly interconnected, but the author has tried to briefly review them according to their essential categories:

a. **Impact on the individual**. The main and foremost individual right affected was, of course, the right to health, severely limited, in many cases, by defective and over-solicited health systems. Characteristics of our postmodern society, such as globalization and ease of travelling, were aggravating circumstances in many ways: the lack of frontiers or border restrictions, relatively low prices of flights, global businesses and supply chains meant people were free and, in some cases, compelled to travel extensively, thus spreading the virus. Travel bans were the first to hit, followed by even more difficult restrictions, such as limitations of rights to gather, to see family members and even to go outside. Supply chains for basic products were interrupted, which led to social unrest and panic.

b. **Economic impact**. The first consequence of extended lockdowns was, of course, unemployment, which used to be at historical low-points in many Western democracies. Businesses were closed or their activity significantly hindered, and by May 2020, the US, for example, had over 40 million unemployed citizens (Reich & Dombrowski, 2021, pp. 1253-1279), with an estimated 500 million job losses worldwide. Commercial demand decreased, essential goods and medical equipment were lacking. States that could afford it struggled to invest in keeping private businesses afloat. Global economy was as hard hit as local ones, and globalization tended to show its disadvantages. International supply chains were disrupted, albeit by the local effects of pandemic, the impact of new border restrictions on transportation and travel bans. Global business models proved inefficient in such context and completely unprepared for such disruptions. Supplies were short and demand was high. Most countries had insufficient stocks for medical products and pharmaceuticals, as well as no virtual capacities to produce them themselves, since those activities were outsourced – predominantly to the very country that was the source of the problem and in a difficult enough situation to need them to alleviate its own domestic problems. From a different perspective, the pandemic generated the acute need to use electronic communication solutions in order to ensure, to some extent, continuation of a wide array of activities, from economic to educational and academic ones. Cyber-crime has taken advantage of this context, particularly since much of

the dedicated software infrastructure was unprepared to manage activities of such magnitude and less focused on implementing security solutions. Attacks on infrastructures and organizations, both public and private, were not a surprise and tended to deepen the chaos.

c. Social impact. Individuals suffering severe limitations of their rights and liberties, under-performing health systems, lack of medical provisions and sanitary equipment, doubled by misinformation and disinformation led to social unrest and panic, and further deepened the crisis. A significant trend was manifesting before the pandemic, that of the unregulated social media, which tends to create hermetic *echo-chambers* of strong opinions and allow radical notions to be multiplied without debate, outside input or any type of challenges. Not to mention deliberate manipulation by actors seeking to advance their own strategic position and change the balance of power, as part of their hybrid war tactics. During the pandemic, those tendencies continued, which made containing the virus more difficult and brought other problems, too: extremist attitudes, anti-vaxxers, techno-libertarianism thrived in self-isolated, self-contained *bubbles*, refusing any official information sources. The *infodemic*, term coined by European Commission vice-president Vera Jurova (European Commission, 2021) thus occurred, drawing hard on disinformation regarding the pandemic origin, virus existence and its consequences etc. Social stratification and polarization often generated by unregulated social media added to domestic tensions, while mistrust in authorities increased after obvious hesitations, bad decisions and errors in judgment.

It was, nevertheless, technology which brought some alleviation to the already dramatic situation, by allowing for concerted efforts of the scientific community to first identify, and then fight the virus. Military and intelligence organizations throughout the world lost operational capacity, forced to protect their own personnel and re-prioritize activities and resources and limit direct contact with other people. The US Army, for example, postponed training for new recruits at the beginning of the pandemic.

d. Political impact. While social and economic life has been severely disrupted, this also had political consequences: democracies needed to approach the threat with un-democratic measures, limiting

rights and liberties in a concerted effort to contain the virus and determining relevant shifts in options. Citizens in democratic countries were concerned with the new restrictions, raising serious questions whether previous normality shall ever return, and suspecting their governments of being reluctant to ever give up the newly-acquired capacities. Social unrest increased in most democratic countries and fake news and manipulations helped, while authoritarian regimes such as China did not hesitate to point a finger at the West for its inability to contain the virus. China has even profited to try and promote its own social and political model, as well as that of other similar states, such as Korea or Singapore, as ideal for crisis-management.

The official newspaper Global Times has actually published several open-eds promoting the narrative of the deficiencies democracies have in handling crises – made obvious by the high numbers of cases and victims, and compared to the much better results in crisis management the Chinese authorities had, using more forceful measures, for example, Hu Xijin`s article *Pandemic Fight Calls for Western Elites to Drop Absurd Arrogance Toward China*; Mario Cavolo`s *US Making it Hard to Admire Democracy* or Ai Jun`s *What Made West Lose the Race of Systems during Epidemic Fights?*. Political leaders claimed to *follow the science*, but since science itself was still fumbling, some of the leaders of major Western democracies lost face. Let us not forget the collective/heard immunity debacle and its consequences on public trust. Decision-making was obviously incoherent, which furthered the crisis of confidence. If forced to also anticipate a positive political consequence of those unfortunate events, I would consider that populism has shown its own limitations and inabilities and its public support is diminishing.

e. International challenges. International alliances and organizations of all sorts also seemed to have difficulties in understanding their role and taking action. Old unsolved grievances seemed not to become secondary, but rather freeze for a short while and then resurface with a more immediate urgency to them. The UN called for a temporary, three-month cease-fire in all conflict areas, the EU lost sight of its divergences with illiberal Member States for a short while, even terrorist organizations advised their followers to

temporarily halt activities which would put them at risk of getting infected.

Nevertheless, global and regional struggles for power did not cease, on the contrary, the struggle to redefine the international relations architecture became more acute, with the same actors aiming to lead and show prominence and continuing to reaffirm their intent to primacy. The US continued its competition with China, even as it depended on it for medical supplies, while promoting the *America First* and, now, *Buy American* domestic policies. EU states struggled to act unitary and to everyone`s benefits while closing borders and banning travels and while Member States competed with one another for resources, from medicines and medical equipment, to tests and vaccines.

Globalization shortcomings came back in focus and became more and more disputed, as states were concentrated on emergency COVID action-plans, measures, and strategies. Important and powerful states in the global balance of power found themselves depending on their strategic adversaries, with no domestic facilities to cater to their own needs, no adequate stocks and reserves, and a fierce global competition for resources. This only led to tenser relations between global powers, as well as to opportunities for regional ones to advance their own interests. Isolationism – including economically- emerged as a revisited counter-trend to globalization, and with an isolationist US, China continues ascending and trying to take charge.

Regardless of the epidemic and in its shadow, rivalries, tensions, and reorganizations in the global balance of power continue with new methods and so does the tendency towards a multi-polar world. No significant new initiatives of global cooperation were manifested in this time-frame, on the contrary, some cooperation formats were significantly weakened - with a notable exception of the EU, which, after a shaky start, managed to eventually coordinate enough, despite some separate opinions, and ensure joint negotiations and acquisitions procedures for the vaccines, as well as a simultaneous start of the vaccination campaign in all Member States.

Travel bans and the genuine need to avoid health hazards has also exacerbated pre-existent nationalist tendencies, and, lacking consensus, international organizations` actions were stalled.

The National Security Approach

There are several questions that need to be debated from a national security point of view and from the point of view of a practitioner, having found myself confronted with some of them years ago. The first one is, I think, one concerning legitimacy: are epidemics a matter of national security?

Debates over the scope of national security date far back and cannot be elaborated on here, since they are far too extended and this is not the purpose of the paper. There are, of course, the two diverging positions – seeing security exclusively as *hard security*, its legitimate objectives connected only to traditional, kinetic threats and risks. There is the opposite view, stemming from the *Copenhagen School of Security Studies*, opting for an all-encompassing concept of security, centred on the safety and wellbeing of the individual, which includes traditional threats, as well as economic, anthropogenic, and naturogenic ones. This notion of extended security includes all areas of social life that have an impact on the individual, becoming legitimate subjects of security through the process of *securitization*. And there are, of course, all the in-betweens, often shaped by momentary interests of political decision-makers and by occurring situations and events.

The traditional take on security under the COVID-19 crisis was representative of the US approach to the sanitary crisis. Kinetic threats held the frontlines for policy-makers and security professionals as well, shaping policy preferences as well as the allocation of resources. The National Security Threats as listed by the FBI were and remain still terrorism, espionage, proliferations, economic espionage, government attacks, perception management and foreign intelligence activities, while the UK only lists terrorism, espionage, cyber threats and proliferation as top national security priorities. Preferences were, thus, shaped and confirmed by the same individuals, and naturogenic threats

were downplayed and under-resourced. Budgets and organizational priorities ran far from public health concerns.

Although domestic security strategies in the US, as elsewhere, alluded to the possibility of natural hazards such as epidemics, they defined little if any instruments and responsibilities for the security establishment. The US Security institutions during pandemic were mostly concerned with securing supply chains for military products and with protecting their own, while strategic documents only made them responsible for dealing with risks of weaponizing biological agents.

NATO, as a military alliance, was also concerned with the concept of extended security, putting the matter up for discussion since 2019, and finalizing a reflection plan in 2020, with 180 proposals for improvement. NATO`s COVID-19 and extended security related plan envisions the need for change which is generated by a new type of conflict among global actors. International relations are less stable, and so are international institutions. Non-kinetic conflicts are considered to be changing the nature of conflict, and are best described by mutual attacks on some areas, doubled by cooperation on others. In a special address at Davos (Putin, 2021), Russian President Vladimir Putin himself hinted to a global conflict manifested as *a fight of all against all*, which is constantly accentuated by the pandemic and the fierce fight for resources. Smaller actors in this new global environment are caught in the middle and find themselves tempted to take sides for potential benefits, but also have significant opportunities which need to be capitalized. Regional actors, such as Turkey, also change the dates of the problem, in their efforts to gain ground. In anticipation of a new strategy, NATO also stressed the aspect of protecting critical infrastructures as a security mission not to be omitted, with an accent on health and environmental ones.

The EU was also concerned with security under the COVID-19 crisis, the 2020 PESCO Strategic Review pointing to progress towards developing joint defence on matters pertaining to public health as well as on military ones. The 2021-2025 phase of PESCO sets ambitious goals of increasing defence spending, alongside interoperability and coordination, for further security and defence integration. PESCO projects include land formations in the EUFOR Crisis Response

Operation Core, as well as *joint enabling*, which contains the European Medical Command and CBRN Surveillance as a Service (Council of the European Union, 2020), therefore proving some level of commitment towards the extended security notion.

Alongside financial instruments much-needed for Member States to tackle the crisis, the EU has also undertaken the development of a Strategic Compass regarding its security and defence policy. The initiative that is to be concluded in 2022 aims to "inject into the system of EU defence cooperation a new dose of political direction" and "provide guidance to the Member States` military planners", alongside "policy orientations and specific goals and objectives in areas such as crisis management, resilience, capability development and partnership" (Novaky, 2020). The Compass undertakes concerted approaches at society-level, with coherent action by all relevant actors, and advocates for more flexible instruments, in the context of far more dynamic risks and threats.

A particularly interesting case in the manners of dealing with the COVID-19 crisis was, in my opinion, that of Israel, in which the phenomenon of *securitization* of the health crisis was easily observed and widely discussed. The non-kinetic crisis was made into a fundamental and legitimate issue of concern for the national security establishment that received strategic and operational command and control. Prime-minister Netanyahu declared the pandemic as *a war against an invisible enemy*, and military forces were brought to support civilian ones in a leading capacity. Public opinion supported the decision, with 65% of Israelis expressing their approval for the IDF to manage the crisis (in Murciano, 2020). This approach, combined with a solid health system, seems to be leading to more satisfactory results than elsewhere.

For Romania`s situation, the notion of extended security is and has been a part of the National Defence Strategy, as it is for many other EU Member States, and from this point of view, our country has proven to be visionary. Epidemics are mentioned as national security threats in the past two such policy documents, but with virtually no correlation between the National Defence Strategy and the National Health Strategy, little good has it done. The latter document, passed in 2014,

is by no means attentive to such threats as a pandemic. The security establishment has not enough resources to properly identify the risks stemming from the health and crisis-management sectors: it does not have the specialists, nor sufficient cooperation with the scientific community, and, to be honest, it is rather tributary to old mentalities, which prioritize hard power and kinetic risks over hectic aspects of modern societies which prove, sometimes, just as disruptive, if not more.

Romania, nevertheless, has a duty to capitalize on its EU and NATO membership, in this regard as in all, with both ensuing rights and obligations. Our primary concern should be to make sure that national security resources do not diminish under crises circumstances, and to prioritize them correctly.

In my opinion, making public health a matter of national security is self-explanatory. Since security is and will continue to be centred on the individual, it is with individual security that the establishment must start, and there cannot be a segregation of the two. Weak, underfinanced, and uncoordinated systems undermine individual and national security, in our country as elsewhere, therefore their improvement through all available means should be taken seriously by decision-makers and the security establishment alike.

A second question could be aimed at what national security can actually do to help prevent and contain such a crisis, and a part of it was answered in the ideas listed above. From providing early warning intelligence and analysis, to ensuring coordination, to managing crisis and relief operations, to monitoring and informing on the spread of disinformation and misinformation, support is available. The Israeli example delves deeper into what can be done to ensure support for the health system under extreme pressure, with effective measures varying from procuring medical equipment, tests and even vaccines through specific methods.

The third and probably most important question is how the national security establishment should manage its own, non-COVID priorities, since the health crisis tended to aggravate several significant security threats. A short look at the section dedicated to the pandemic`s impact more than proves that.

National security systems and institutions had to re-think their strategic and operational priorities, including regarding the allocation and prioritization of resources, and the protection of their human resource.

Nevertheless, I believe there is a continuity of the former acknowledged risks, albeit classical ones, such as terrorism, organized crime, conflicts, or new ones such as cyber or hybrid threats. The pandemic does not mean they have subsided, but rather it is super incumbent on them, making it necessary to adapt, adjust, learn lessons and react swiftly, while building resilience.

The pandemic impacted the prioritization of old risks on the bases of the stringent momentary needs, but they persist, without essential changes in their basic data or in aggravated forms. It brings much unrest, but also the opportunity for our societies to improve. Moreover, it brings the opportunity for political decision-makers and the decision-making process to improve, since it seems to have promoted a decline of populism. Politicians, as drivers for security, now have the cause and motivation to reinvent themselves, by being receptive, by approaching and heading professionals and thus demonstrating a good understanding of the security problems, in a context dominated by informational war, massive disinformation and sophisticated constructs and narratives built on half-truths, which alter perceptions and increase mistrust. The public`s need for trust and knowledge should be properly met by authorities, with truth, facts, clarifications, and debate within the framework provided by political legitimacy and science. And wise decision-makers should see that resources for national security are not discontinued or significantly diminished, because the same thing doesn`t happen to risks, threats, and vulnerabilities.

The acute need for security withstands pandemic, or rather becomes reinforced by it, both concerning hard security, and smart security. Roles tend to shift, while the military becomes more and more involved in civilian crisis. The security establishment, intelligence included, must strive to move pro-actively, whether in deciphering

informational attacks, identifying health hazards or potential sources for relief.

Conclusions

I support a reconceptualization of national security and a wider acceptance of the extended security concept, which I think would make the security establishment able to widely approach matters such as public health, with a serious impact on society, without raising debates on legitimacy. I think there cannot be a society without health, and health is part of security, but I am also convinced that the security establishment alone cannot produce satisfactory results. Cooperation with academia, the R&D sector, medical experts and professionals and health institutions – both public and private, are essential for a better approach to a future crisis of the kind.

At the same time, domestically we need to identify normative and strategy solutions which can allow for easier, more flexible prioritization of national security issues according to the current context, despite the fact that generally state institutions are rather conservatory and bureaucratic, and decision-making mechanisms tend to be lengthy and tedious. All this for one purpose: putting the citizens` needs at the centre of the security enterprise.

I also believe a pandemic is a global threat, which requires both a local and a global approach. Individual states` measures seem to count, in the balance of prevention and containment, as much as those of international organizations and better results can only be achieved through cooperation. In this regard, I salute the US returning to the WHO and reassuming its role as global leader. But further advances must be made; first of all concerning global cooperation at all levels – from security, to health and crisis management, to business and social media regulation etc.

A particularly important lesson to be learned by the national security establishment is that it needs to enhance its own cooperation and partnership with public and private sectors in all areas of interest for the extended concept of security, particularly when discussing

situational awareness and the development and securitization of technologies, building resilience of IT&C and critical infrastructures.

Nevertheless, security strategies need both an international and a domestic dimension. Therefore, they need to be connected to national features, stemming from aspects such as geographical positioning, proximity to global actors, social, cultural and infrastructural specifics.

Finally, with regard to the security environment, the international context continues to be dangerous, not just punctuated by threats and risks, with amplified, interconnected problems and negative developments in almost all dimensions, from the economic to the social and military ones. Negative developments are aggravated by geopolitical competition among the great actors, but also by uninspired political decision-making, the technological revolution and the liquefying of threats. Current dangers stem from classical, kinetic threats, as well as from recent, novel ones, blurring the line between peace and war and requiring alternative, innovative solutions. Leaders under pressure must understand the phenomena they are confronted with, and to act decisively, through correct prioritization, institution and capacity-building and modernization, and multiplication of action-nodes at society level.

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IMPACT OF COVID-19 ON KNOWLEDGE PRODUCTION CASE STUDY OF A KNOWLEDGE SOCIETY

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Abstract:

The severe acute respiratory syndrome coronavirus 2 (COVID-19), declared by the World Health Organization on March 11, 2020 as a pandemic, does not represent only a health crisis but a crisis that affects the daily lives of humans around the world, all economic sectors and knowledge production. Our article seeks to demonstrate the impact of the COVID-19 health crisis on the production of knowledge, in the case of a knowledge society. The methodology adopted in our study is form first on the choice of the knowledge society based on the ranking of the Global Knowledge Index (GKI) relating to the year 2019, then the analysis of the variable inputs of the production of the knowledge: the production of knowledge workers, research and development expenditure, and knowledge institutions. Preliminary results show the impact of the COVID-19 health crisis on them. The originality of this article lies in the study of the situation of knowledge production, little covered in recent studies, in this case in the context of the COVID-19 pandemic.

Keywords: *COVID-19, Knowledge production, Knowledge society.*

Introduction

The quantity and quality of knowledge produced by a society demonstrate its capacity to contribute to the global reserve of human knowledge. A radical change in knowledge production has been noticed in the recent decades, and became no longer limited to universities or affiliated to individual disciplinary contexts. In this sense, the knowledge production has undergone a rapid evolution which has

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allowed the establishment of an environment of knowledge co-creation (Burlea-Schiopoiu, 2014, p. 2).

History explains that previous epidemics and pandemics were accompanied by rapid scientific and technological activity and therefore have an increasing impact on knowledge production, measured by the number of scientific publications and patents. The health, socio-economic and human crisis relating to the COVID-19 pandemic is experiencing the same consequences, namely a growing involvement in the tools and quantity of knowledge production on a global level.

The production of knowledge represents an aspect of the knowledge society. This concept refers to a society that creates shares and uses knowledge for the prosperity and well-being of its people. The population of the knowledge society is characterized by a high level of education and an important proportion of its workforce represents the *knowledge workers*. The state and the private sector invest heavily in education, scientific research and development. Private, government and civil society organizations are transforming into intelligent organizations constantly innovating. Hence, the existence of multiple centres of expertise and a polycentric production of knowledge. The knowledge society industry manufactures products with built-in artificial intelligence. There is an emphasis on knowledge organized as digital expertise, stored in databases, expert systems, organizational plans and other media.

Based on the *Global Knowledge Index* for 2019 developed by the UNDP, our study will focus on Switzerland as the first country in the ranking. The COVID-19 pandemic is currently having a significant effect on many aspects of daily life and also on the present behaviours of players in Swiss training, i.e. people, companies, institutions, as well as than on international mobility.

This article aims to demonstrate how the inputs of the knowledge society, Switzerland, have been impacted by the health crisis of COVID-19. In the first section, the article reviews the theory and a presentation of the knowledge society, the knowledge production and knowledge production in times of health crises. The second part explains the choice of country and the methodology adopted. The third

part of the article describes the main results of the research at the input level of knowledge production in Switzerland.

Overview of knowledge production in times of crisis

The knowledge production as a characteristic of the knowledge society: Although its modern aspect, the concept of the knowledge society has known a historical trajectory since the 1940s. The industrial revolutions in the 17th and 18th centuries brought about the emergence of a new socio-economic and technological framework for society, and allowed the opening of a path towards a model of a knowledge society at the beginning of the 20th century (SinghaRoy, 2014, p. 5). In literature, the term *knowledge society* (Hayek, 1945) is sometimes confused with other concepts as the "Society information" (Umesao 1963, Castells 1989), "The service society" (Gershuny and Miles 1983), "the learning society" (Lundvall and Johnsosn 1994), "the scientific society" (Drucker, 1992) or even "the 5.0 society" (Salgues 2018).

Knowledge represents a key driver of productivity and economic growth with significant investments in research and development, education and training in a knowledge society (OECD, 1996). The concept of the knowledge society refers to an economic and social system able to create new ideas, thoughts, processes and products convertible into economic and social wealth (Huggins 2004 Nicolescu and Nicolescu 2005) through the exploitation emerging technologies (Lytras and Sicilia 2005).

The knowledge society presupposes an intensive use of information in all areas of human activity, with significant economic and social impact. New information and communication technologies are used both at the individual level and within organizations with great flexibility, resulting from the independence of human activity linked to space and time. The knowledge society refers to a society that allows all its members to participate in the process of the production and dissemination of knowledge, a society that relies on the knowledge of its citizens to stimulate the dynamism of its economy (Huggins, Johnston, and Steffenson 2008).

The knowledge society is characterized by a high level education of its citizens, an industry with a built-in artificial intelligence, learning organizations and a culture of use and the production of knowledge (UNESCO 2005).

Knowledge production is not limited to the university: The authors of the book *The New Production of Knowledge* (Gibbons et al. 1994) designate it as an essay of reflection around the radical transformation of the knowledge production and the research process (Nowotny, Scott, and Michael 2003). Indeed, the authors describe the development of «mode 1» of knowledge production (Gibbons et al., 1994). Until 1950, this mode was characterized by a certain cleavage between academia and society. The academic world would be based on an autonomous university, independent scientific disciplines and specialties, and the possibility for scientists to decide what is science and truth. There seems to be no interaction between academia and industry. On the other hand, «mode 2» of knowledge production (which would describes science today) characterizes and announces the weakening or even the collapse of the modern university, the disappearance of scientific disciplines and the atrophy of control. Scientists on the direction and content of research programs (Nowotny et al., 2003, p. 2). This mode 2 would be characterized by a new interdisciplinarity, by a great mobility of temporary groups of experts organized provisionally around urgent problems and by the primacy of economic and social problems in the decision to develop a particular sphere of knowledge. Society would thus reject the legitimacy of the prerogatives of science, its institutional autonomy and its epistemological and cultural identity (Shinn 2002).

Knowledge production is no longer affiliated only with individual disciplinary contexts, nor limited to academic institutions (Burlea-Schiopoiu and Burdescu, 2017). Indeed, new non-university players such as public laboratories, industrial laboratories, innovation hubs, technological hubs and 'think tanks' are asserting their influence in a diverse and heterogeneous knowledge production space (Hessels et al. van Lente 2008). In addition, the transformations that the world economy has undergone have made human capital an increasingly crucial input in the production process (Orivel 1996), as well as the production of knowledge is now oriented towards broader impacts that

translate research findings into policy and practice to achieve particular, useful, and actionable ends (Parker, Racz & Palmer, 2018).

Today, the innovation system is at the heart of the problem, the production of knowledge must cross-fertilize the academic sector, businesses, government, civil society and the environment and design ecosystems that are benchmarks to an extended complexity of knowledge production and knowledge translation (Carayannis and Campbell, 2017).

The production of knowledge in times of health crises: The World Health Organization (WHO) declared Severe Acute Respiratory Syndrome Coronavirus 2 (COVID-19) on March 11, 2020 as a pandemic. According to the WHO, COVID-19 is not only a global health crisis due to its unpredictable nature and the lack of adequate drugs (Acter et al., 2020), but that it will affect all sectors (World Health Organization 2020). The challenges remain immense in a health crisis relating to a globally distributed pandemic, and its impact has raised alarm in an exceptional way (Mendes and Carvalho, 2020). The current global COVID-19 pandemic highlights issues of risk, uncertainty, knowledge and cultural values in times of crisis (Hulme et al., 2020).

This is not the first pandemic the modern world has faced. Indeed, influenza A (H1N1) was declared a pandemic in 2009 (WHO 2010), nor the only viral disease that many countries are facing, for example Zika virus, Ebola virus or measles virus. The experiences of such viral epidemics and pandemics have shaped the way governments respond to these health crises (Moy et al., 2020).

Epidemics have caused major changes throughout human history (Uri, 2020), large epidemic outbreaks are accompanied by rapid scientific and technological activity since they represent imminent threats to human life (Colf, Brothers, and Murata, 2016). The Ebola epidemic in West Africa in 2014 illustrates this effect. Research shows that the epidemic has amplified the production of knowledge related to Ebola globally (Quarcoo et al., 2015), creating new interdependencies between scientists, doctors and inventors. Scientific papers and related clinical trials exploded, but what was more revealing was the geographic reconfiguration of knowledge creation activity, placing the most affected African countries as relevant hubs in global networks of

co-author and collaboration, despite the lasting centrality of the traditional scientific centres of North America and Europe, before and during the epidemic (Hagel et al., 2017).

However, the governments responses observed to the pandemic Covid-19 were more important than the previous pandemics, due to the breeding and scattered asymptomatic numbers (Liu et al., 2020). The Covid-19 pandemic has created an unprecedented challenge for knowledge-producing institutions. For many researchers, the shutdown induced by the COVID-19 pandemic was an opportunity to reflect on alternatives to capitalist production methods (Alves and Kvangraven, 2020; Mair, 2020; Spash, 2020).

In its report «Building a knowledge society» (UNDP and AFESD 2003), the UNDP defined the outputs of knowledge production through scientific publications and patents. Indeed, several examples of knowledge production to society in times of health crisis emerged, including medical research (Vaccines, testing, creation of new fans) as well as the analytical work of the socio-economic impact of the pandemic (Teresa, 2020). The COVID-19 pandemic has generated a large number of scientific publications up to 21,400 documents published in the Scopus database in the first half of 2020 (Aristovnik, Ravšelj, and Umek, 2020).

Methodology – Case study

The methodology adopted in our study of the impact of the COVID-19 health crisis on the production of knowledge, more specifically in the case of a knowledge society, is firstly based on the choice of the knowledge society grounded in the ranking of the global knowledge index (GKI) relating to 2019 (UNDP, 2019), then the analysis of the knowledge production variable inputs of the knowledge society defined above. According to the UNDP, the three variable inputs of knowledge production are defined as follows: the first variable represents the output of knowledge workers, the second variable represents research and development expenditure and the third variable represents knowledge institutions (UNDP & Arab Fund for Economic and Social Development, 2003).

Case study of a knowledge society: Switzerland Our study represents the choice of a knowledge society based on the Global Knowledge Index (GKI) developed by the United Nations Development Program (UNDP, 2019). This index is considered as a scientific tool to measure the multidimensional aspect of knowledge, referring to the concepts of the knowledge economy and the knowledge society.

The structure of the GKI index is based on six sub-indices and covers the essential dimensions of development, namely:

- Pre-university education;
- Technical and vocational education and training (TVET);
- Higher education;
- Research, development and innovation (RDI);
- Information and communication technologies (ICT);
- Economy.

A seventh pillar has been added to support sectorial indices, General enabling environment, as these sectors do not operate independently of their environment, but rather in a space governed by a range of contextual factors – political, socio-economic, health and environmental.

According to the 2019 edition of the Global Knowledge Index report by UNDP and the MBRF, Switzerland is at the top of the world ranking. It represents a suitable example for a knowledge society model for this study (UNDP, 2019).

Measuring knowledge production: The UNDP identifies 3 variable inputs of knowledge production (UNDP and AFESD, 2003):

a- Producing knowledge workers: According to F. Drucker, the most important asset of a 21st century institution would be its knowledge workers and their productivity (Drucker, 1999, p. 92). The concept of *knowledge workers* refers to workers, whose activities are mainly centred, to varying degrees, on the creation, production, capitalization, preservation, dissemination and transmission of knowledge (Bouchez, 2006). They are self-managed and involved in defining their scope of work, and insist on the quality and quantity of results (Jacobs, 2017).

b - Expenditures for research and development (R&D): Related to research and development of goods or services of a company, the R&D expenditures are an important element for a continued growth of the company. Indeed, innovative projects are characterized by high risk and by very specific and often intangible assets (Belin, Cavaco, and Guille, 2011). Companies in the industrial, technological, healthcare and pharmaceutical sectors generally have the highest levels of R&D spending.

c- Institutions for research and knowledge development: represented by the higher education institutes, R&D business, research centres and public and government agencies. These institutions seek to generate knowledge about important global issues, resolve transnational disputes over knowledge claims, and provide rationale and evidence to influence global policy-making (A. Miller, 2007).

Impact of the COVID-19 crisis on knowledge production: In terms of knowledge production outputs (scientific publications and patents), the number of international patent applications filed under the PCT was even 6.7% higher in the first half of 2020 than during the same period of the previous year (WIPO, 2019). Thus, the potential remains great for technological breakthroughs and innovations.

Variable 1: Knowledge workers production

Promoting education related to Science, Technology, Engineering and Mathematics (STEM) is a priority in many countries, as scientific skills and those related to problem solving and quantitative analysis are essential in today's unpredictable economy which is increasingly driven by big data and in high demand in the labour market (OECD, 2020).

Switzerland is an interesting example of analysis given its results in mathematics and the unique organization of its education system (Kaufmann and Wittmann, 2018). Over 40% of the Swiss workforce is involved in the creation, dissemination and application of scientific and technological knowledge (SERI, 2020, p. 19). The World Bank Statistics presents a global ranking concerning the knowledge workers in 2020, where Switzerland is in the fourth position while other countries as Germany and France occupy the 11th and the 14th positions respectively (World Bank, 2020).

According to the scenario of the Federal Statistical Office (FSO, 2020), there would be sustained annual increases in the number of university students in 2020 (+ 2%) and 2021 (+ 1.7%) followed a very moderate increase in 2022 (+ 0.3%).

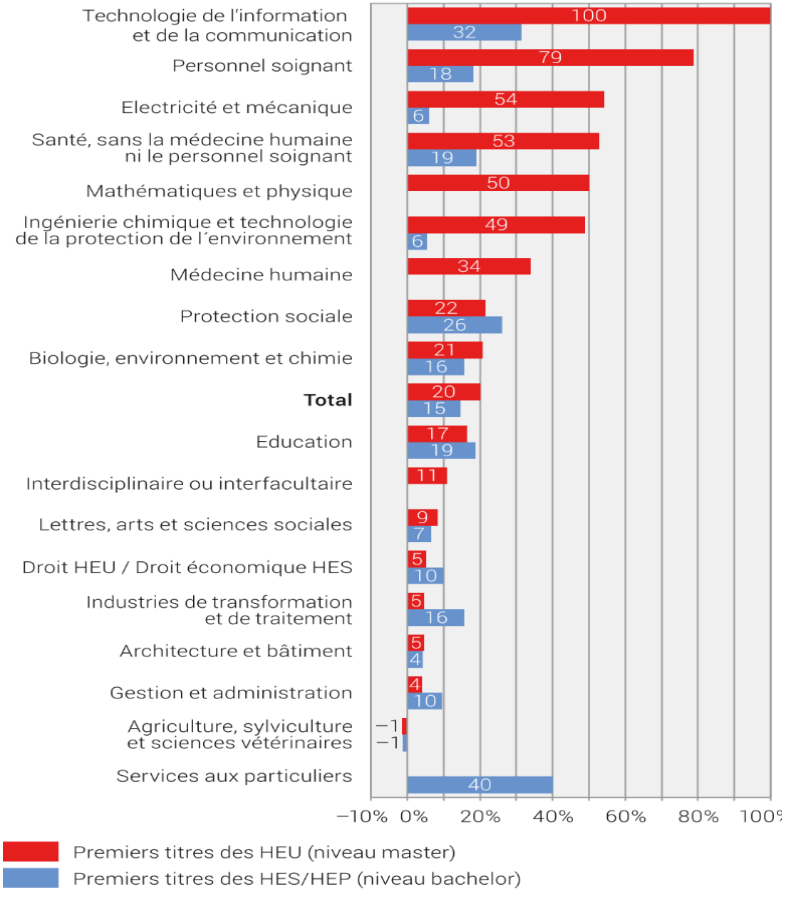

Figure 1: Training outlook – Evolution by field of training in %. Status October 2020 (Source: OFS 2020)

In 15 years, the fields of "Electricity and mechanics" and "Information and communication technology" had increased and represented respectively 73% and 57% of all students at diploma, bachelor or master level (OFS 2020).

These trends are expected to continue over the next ten years and students in the "Information and Communication Technology" field of training at universities (+ 100% of masters awarded between 2019 and 2029).

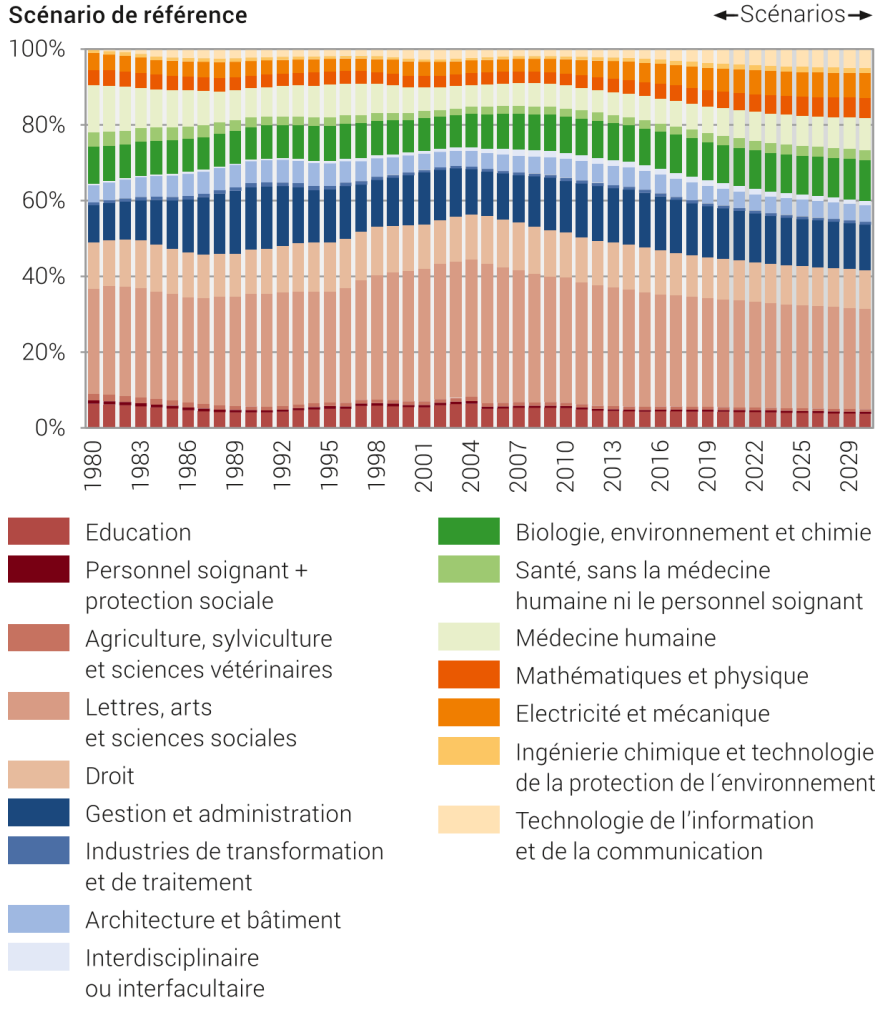

Figure 2: Scenarios 2020-2029 – UTE students at bachelor or master level (Source: OFS 2020)

Due to the COVID-19 pandemic and the economic situation, the holders of a vocational diploma should be more likely to enter specialized universities in 2020 and 2021. The total number of UAS students should then, according to the scenario, grows by 1.7% on an annual average in 2020 and by 2% in 2021 (OFS 2020).

Variable 2: Research and Development (R&D) expenditure

The global GDP will decline by 4.9% in 2020 according to forecasts by the International Monetary Fund (IMF), what about Research and Development (R&D) expenditure?

Research and development represents a source of innovation and knowledge creator whose activities include applied research to develop new products and processes, such as the manufacture of drugs, machines or innovative electronic instruments (OFS, 2020). The Gross domestic expenditure on R&D refers to the total expenditure on R&D work performed by all enterprises, research institutes, and university and government laboratories (OECD, 2017). Indeed, R&D expenditure is highly concentrated in a few thousand companies around the world, with the 2,500 main companies spending on R&D being responsible for 90% of the R&D funded by companies worldwide.

During the previous economic crises (economic slowdown in the early 1990s, early 2000s and the economic crisis of 2009), R&D expenditure has always grown in parallel with GDP (Dutta et al., 2020). Reflecting the economic slowdown, spending on R&D and other innovation spending is expected to decline in 2020 (Cornell University, INSEAD, and WIPO 2020). The main reasons for reducing business innovation spending are reduced revenue and cash flow, overall lower costs, and more risk-averse investors and banks. Companies therefore encounter difficulties in tapping into external sources of funding to support their investments in R&D.

In Switzerland, two thirds of R&D activities are funded and conducted by the private sector (around 2.3% of GDP) (FSO, 2019), while the higher education institutions represents nearly a third of total R&D expenditure (CHF 6.2 billion) (SERI, 2020).

Despite the World Intellectual Property Organization (WIPO) statements which assert that Switzerland has not experienced a drop in R&D spending over the past two decades, and that innovation activity has continued at a high level (WIPO 2019), other reports explain that following the international monetary and geopolitical events of recent years, he art R&D spending declined between 2015 and 2017 (FSO, 2019d). This decrease is explained by the prudence of companies in launching new large-scale R&D projects during the current crises.

The economic sectors where Swiss R&D investments are concentrated in Switzerland, in particular pharma, biotechnologies, industrial techniques and chemicals, are less affected by the pandemic than others (Behrens et al. 2020). The category of R&D investment in Switzerland experienced a negative development. Indeed, various R&D projects have been delayed due to the difficult economic situation (SECO 2020). Investment projects planned for the year 2020 fell sharply in R&D (-14.9%) (Koller, 2020).

Variable 3: Knowledge institutions

Knowledge institution refers to the institute that makes a significant contribution to research and innovation. Knowledge production institutions in Switzerland include:

- *The institutions of higher education* (the Federal Institutes of Technology, cantonal universities, universities of applied sciences (UAS) and universities of teacher education (UTE).
- *Research institutions* (the research centres are like the Swiss Centre of Expertise in the Social Sciences (FORS) that collect, process, analyse and make available information and scientific documentation as a basis for further research. The art institute's research such as the Swiss Institute of Allergies and Asthma Research (SIAF), centres of technological excellence such as the Swiss Centre for Electronics and Micro Technology (CSEM) which focuses in particular on knowledge transfer and technologies.
- *The companies engaged in R & D*: The Swiss companies increased their R&D spending since 2009 and are now well above the average for the overall economy. According to the Swiss Start-up Radar,

around 300 start-ups are created in Switzerland each year, four times more than 15 years ago. In an international comparison, Switzerland has a high proportion of start-ups in the fields of medtech; mechanical and electrical engineering; clean energy and technologies, biotechnology; and financial services (startupticker.ch, 2018).

The impacts of the COVID-19 pandemic on the productivity of knowledge institutions in Switzerland could be defined in the change in the remote working mode, applied since the closure of schools and universities on March 17, 2020 (Bott 2020), reduction of international education and cancellation of a number of national and international conferences (OECD 2020). Knowledge institutions play a central role in the development of knowledge and are closely linked to the teaching process (Burlea-Schiopoiu and Rainey, 2013).

Conclusion

Historically, the production of knowledge in times of previous health crises has always experienced development. Previous pandemics and epidemics such as influenza A (H1N1), Zika virus, Ebola virus or measles virus have created new interdependencies between scientists, doctors and inventors which allowed an amplification patents, clinical trials and the scientific articles. The analysis of the impact of the COVID-19 health crisis on the production of knowledge is now still unclear due to the unavailability of statistics relating to the variable inputs of the production of knowledge. A future quantitative study will best present the impact of the current health crisis on the production of knowledge workers, R&D spending and the production of knowledge institutions.

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#TRANSFORMATION – THE TRANSFORMATION PROCESS – THE ROAD TO A DATA-DRIVEN (INTELLIGENCE) ORGANIZATION

BIG DATA AT THE BORDER: WHERE DO WE DRAW THE LINE?

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Abstract:
The buzz of "Big Data" permeates society. This 'new' data, characterised by its volume, variety, velocity, and veracity changes the ways we live, as an increasing number of actors from a variety of sectors in public/private spheres and civilian/military contexts seek ways to operationalise data for value. This paper seeks to offer an additional viewpoint from which we can explain some of the challenges and limitations on the road to data-driven intelligence and its integration in security and intelligence organisations. The scope of this paper is refined to analysing such challenges in the context of border security, although similar challenges might and do appear in other applications and fields. An auto ethnographic approach is adopted as a way to illustrate and remind that the data we collect, process, and store is data about people, and further, how we choose to use (or not use) this data has implications for people. The bottom line of this work is that as we pave and forge towards data driven intelligence, we must acknowledge and remember that the road both starts and ends with human intelligence.

Keywords: *data-driven intelligence, Big Data, artificial intelligence, borders, security*.

Introduction

Improvements and innovations in information and communications technologies (ICTs), in tandem with more efficient and affordable mechanisms to travel and exchange ideas, produce today's increasingly interconnected information society. The volume and velocity with which data is produced, collected, and analysed is unprecedented; this offers benefits for fields such as science, medicine

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and healthcare, business, commerce and trade, transportation, law and criminal justice, and security. In these contexts, capitalisation of Big Data can assist in supporting decision makers to make well-informed judgements and minimise uncertainty, cognizant of historical evidence, facts, and trends. For policymakers, governmental agencies, and security practitioners, Big Data can also support activities to mitigate threats to their populations' values, freedoms, rights, and lives. Intelligence agencies and departments have a critical role: they must collate, process, and interpret data and communicate their analyses with the aims of maximising benefits and opportunities and minimising pitfalls and threats. Within the Schengen and EU zones, for instance, as citizens share common values and enjoy freedom of movement, it is imperative to strike a balance that permits this mobility, but also offers protection, security, and justice. Border security, control services, and intelligence agencies thus have an important responsibility to maintain and strengthen social and physical borders in pursuit of these goals.

Data collection and sharing pertaining to citizens, foreigners, movements, and threats are critical for the protection of Member States and the collective Zone. Socio-technical systems of surveillance and border control offer spatial and temporal advantages; however, there are also drawbacks regarding their use. This paper seeks to offer an alternative perspective from which to consider data-driven intelligence by elucidating some of the challenges, limitations, and implications in the context of border security. An auto ethnographic approach is adopted as a way to illustrate and remind that the data we collect, process, and store is data about people, and further, how we choose to use (or not use) this data has implications for people. To achieve its purpose, this paper first traces the history of the Schengen Area, before discussing relevant current and upcoming instalments of information technology systems that are deployed for intelligence purposes. Subsequently, this piece comments on the benefits and opportunities Big Data, data-driven intelligence, and artificial intelligence offer for border stakeholders. Highlighted are three emergent concepts of how Big Data and information technologies have increasingly been deployed for purposes relating to surveillance, migration, and border control; these concepts are "dataveillance," "social sorting," and the "Ban-

Opticon." The paper then analyses three caveats of data-driven intelligence in border management, namely concerns of biases and fairness, a lack of context, and reliance on the past as an oracle for the future. This paper then speculates about additional obstacles of Big Data, data-driven intelligence, and artificial intelligence (AI) by delving deeper into the ramifications of the COVID-19 pandemic. It concludes with final reminders about the importance of human involvement in human-techno problem-solving approaches and paving the way forward for facets of border control, migration, surveillance, intelligence, and security.

Entering the Schengen

In the past centuries, as the world became globalised and interconnected, fear of the foreign and the unknown settled in the hearts and minds of citizens and institutions alike. In tandem, populations grew and travel became more affordable, putting strains on the abilities and resources of the state. This became apparent saliently in the contexts of law enforcement and authorities recognised a need to regain control for the safety and security of law-abiding citizens and the whole-of-society (Cole, 2002). Nevertheless, the aspiration for freedom of movement between European nations, a dream dating back to the Middle Ages ("The Schengen Agreement"), was not lost. During the 1980s, concrete discourse and groundwork officially broke for the establishment of a border-free zone; spearheaded by France and Germany, on 14 June 1985, an agreement abolishing internal borders within the termed "Schengen Area" ("The Schengen Agreement") was signed by France, Germany, Belgium, Luxembourg, and the Netherlands ("The Schengen Agreement"). Since then, the Area has expanded more than five-fold, and with it, the development of social, judicial, legal, and technological frameworks to ensure safety and security within the territories. The current area comprises 26 countries, of which 22 are also Member States of the European Union (European Parliament, n. d.). Once within the Schengen Area, travel is permitted internally from one country to another with people generally not subject to border checks (European Parliament, n. d.).

A System of Systems

Building a Europe without internal border controls implies the concern to harmonise and reinforce (European Parliament) external borders; indeed, to guarantee internal freedom of mobility for citizens, policymakers have "sought to compensate for loss of control towards third-country nationals" (TCNs) (König, 2016). Currently, largely three interconnected databases— the Schengen Information System II (SIS II), Visa Information System (VIS), and the European Dactyloscopy (EURODAC)—form the technological infrastructure that allows for storage and retrieval of information relating to border security and migration; in the coming years, these systems are expected to be further supplemented by the Entry/Exit System (EES) and the European Travel Information and Authorisation System (ETIAS) (European Commission). These systems are interoperable and complementary. SIS II contains alerts for the purpose of refusing a TCN entry or stay in the Schengen zone (Regulation (EC) No 1987/2006).

As it is the second-generation rendering of the databased ICT infrastructure, the newer system allows permitted authorities the ability to access and exchange information concerning issued alerts on individuals and objects (Directorate General for Communication, n. d.). VIS serves to improve the implementation of common visa policy and reinforce cooperation between consular parties (Regulation (EC) No 767/2008) by allowing access to information regarding visa applications, acceptances, and refusals (Regulation (EC) No 767/2008).

The system can also be used to identify and verify persons present within the Schengen Zone, and their right of stay (Directorate General for Communication). The EURODAC database compiles data on applications filed by TCNs or stateless persons for the purposes of international protection; the database also assigns responsibility for the individual to the Member State wherein the application was lodged (Regulation (EC) No 203/2013). Querying this database, authorities can verify the identity of applicants or those crossing physical borders (Regulation (EC) No 203/2013). Expected for implementation and operationalisation within in the next two years, EES and ETIAS are the latest additions to the border, migration, and security ICT arrangement.

The EES collates the identity and travel documents of non-EU nationals, registering details of their entries and exits at border crossing points (European Commission). The system will replace the manual stamping of passports and calculate the permitted duration of stay, facilitating authorities' abilities to identify and trace over-stayers (Regulation (EC) No 2017/2226). ETIAS collects information on non-EU nationals who travel under visa-free regimes for stays under 90 days (European Commission, n. d.); the system thus issues authorisations for travel as a precondition for entry into the internal territories (Regulation (EC) 2018/1240).

Collectively, these systems strive to offer benefits such as assisting in the fight against terrorism (Bux, n.d.), combatting transnational crime (Bellanova and Glouftsios, 2020), addressing irregular migration (Bellanova and Glouftsios, 2020; König, 2016), thwarting human trafficking, and offering assistance in search and rescue missions (Bux, n.d.). These infrastructures support migration and security policy and help to engender an area of freedom, security, and justice (König, 2016). In the context of budgetary pressures, resource constraints, high costs of training and maintaining human personnel (Haggerty, 2006), and the perceived unreliability of these human agents, automated systems that filter, monitor, and alert are advantageous. Furthermore, higher traveller traffic and increasing volumes of data campaign for an imperative to organise, rank, and prioritise individuals based on the threat they pose to society (Duwe and Kim, 2016). Databases, automated systems, and AI-algorithmic processes prove comparably inexpensive and efficient, reducing the ratio of human-to-technological monitoring (Haggerty, 2006). In addition, these systems offer benefits to travellers in the form of facilitating faster entry/exit speeds and greater efficiency and security (European Commission for Migration and Home Affairs).

From enhanced ICT infrastructure, systematic collections of data, ubiquitous surveillance mechanisms, and heightened uncertainty and fear, such as following attacks in Madrid in 2004 and London in 2005 (König, 2016; Bigo, 2006), three distinct concepts for protecting internal society, enhancing security, and vetting external parties emerge: "dataveillance," "social sorting," and the "Ban-Opticon."

"Dataveillance" is a term coined in 1988 to suggest that today's governing actors can more easily trace and track individuals and groups compared to authorities of the past; this ease is attributed to facilitation based in computer-based technologies, faster computational processing, larger storage capacities, and increased access to digitised information (Clarke, 1987; Galič, Timan, and Koops, 2017).

"Social sorting" describes the acquisition of personal and group data, with the intention of classifying people into predetermined categories, which allows for targeted intervention, "special treatment, suspicion, eligibility, inclusion, access," (Lyon, 2003) and more. While data categorisation and the demarcation of populations are not new phenomena in themselves, an uptake in perceived risks (Lyon, 2003) contestably justifies the deployment of more surveillance devices. Furthermore, as practices using Big Data accelerate "routine and systematic searches of data doubles," (König, 2016) human operators are increasingly at a distance both physically and psychologically. Lastly, the 'Ban-Opticon' refers to tactics of surveillance whose primary purpose is not to monitor or capture misbehaviour, but to prohibit certain "bad" (Galič, Timan, and Koops, 2017) individuals from some type of access or opportunity. The concept proposes that, particularly in times of crisis or emergency, government unease and insecurity permits the delineation between perceived hostile foreigners ("them") and benign citizens ("us"); moreover, the state of emergency rationalises "practices of exceptionalism, acts of profiling and containing foreigners, and a normative imperative of mobility." (Bigo, 2006). Commonly, these concepts tie together xenophobic tendencies, thus supporting technological and sociotechnical means and motives; the imperative to vet, detect, and monitor foreigners within or attempting to enter internal borders; and extracted data-driven intelligence to drive future mobility policy. Moreover, recent attacks in France in 2015 and 2016, Belgium in 2016, and the UK in 2017 amplify the relevancy of these concepts, their use, and their effects in practice.

An Understanding of Self

In an attempt to understand and shed light on Big Data, border security mechanisms, and intelligence services, this paper adopts auto ethnography as a methodology, in consort with examples collected from informal conversation with other (anonymised) TCNs. The rationale behind this approach is threefold. First, this paper strives to offer an alternative lens from which to view the use of a data-driven approach in border security. Recognising insider knowledge entails one is privy to degrees and types of specialised knowledge, a fresh look from the outside-looking in or a "non-expert" can pave the way for critical reflection. Further, despite lacking an intimacy with the mechanisms of border control that are achieved through professional training and working experience, this author posits that personal experiences offer a different, yet equally valid, epistemological approach and contribute both to 'non-expert' expertise and a degree of credibility. Auto ethnographic accounts and communications with others who have lived through similar experiences have particular relevance for border control and other security applications, for these techniques allow us to avoid generalising on behalf *of*, but rather allow us to speak *with* those affected (Jarvis and Lister, 2013). Finally, embracing an auto ethnographic account can illustrate themes of belonging and self-identity (Weber, 2011), while also humanising the notions of a data-driven approach to problem-solving. As will be expounded upon later, an interesting aspect of Big Data is the attempt to categorise, organise, and sort mass collections of data, which has arguably reduced human beings to their "data doubles."(Galič, Timan, and Koops, 2017). Puzzlingly, this process allows for both hyper personalisation and depersonalisation (Dunlap, 2018). For border controls, this means the individual is dually a sum of their individual data and none of their individual data.

There are limitations and caveats to such an approach. Most saliently, writing as a TCN implies the author might hold predispositions or bias regarding the use of data-driven processes for matters of border security. Secondly, this paper is limited to its collected data, herein, personal and first-hand accounts acquired

through informal conversations with other TCNs. This data collection caveat entails there is an extent to which the data can be alleged as confirmational, that is, consistent with leading judgements or conclusions. It should also be noted these accounts are not universal.

Lastly, this paper was written in the first year of the COVID-19 pandemic, recognised around the world as a time of immense uncertainty and unknowns. Data and knowledge acquired in hindsight or as people and the world adjust and learn to cope with the pandemic and its ramifications might yield differing viewpoints, conclusions, or recommendations. Weighing these considerations, however, this approach is deemed justified and appropriate as it first and foremost illuminates an alternative perspective from which to view data-driven intelligence for border services and decision making. Secondly, this author attempts to mitigate personal biases and experiences with border control by offsetting these with her diverse academic and professional background in both the social sciences and information systems and technology. These fields are at times divergent, or even at odds, and unable to find a common ground or communicate with one another. Thus, the ethnographic approach enables the author to communicate and comment on a subject of not only personal significance, but also one on which she has pluralistic subject-matter insight.

Fairly Biased?

Three sociotechnical challenges inherent to data and data-driven technological processes further underpin data-driven intelligence for the purposes of border security and control; consideration of these limitations consequently offers authorities a stronger ability to manage or minimise the negative consequences or adverse ramifications. The first concern is in regard to bias and fairness. Paradoxically, while automation intends to remove the problem of decision-making based on individual biases/prejudices by instead using a data-driven approach, this ignores problems of prejudicial, sample, or measurement data biases. Likewise, the notion of 'fairness' as a societal value is also contestable when human beings are subject to deconstruction into data

categories, and the credence of particular attributes working to their favour/detriment is indeterminate.

Concerning bias, prejudicial biases arise from social stereotypes, orthodox opinions, and their influences (Mehta, Shah, Patel, and Kanani, n.d.). The aforementioned databases store information pertaining to, *inter alia,* names and aliases; place and date of birth; sex; nationalities; "specific, objective physical characteristics not subject to change" (Regulation (EC) No 1987/2006); biometrics; passport and visa information; residence; occupation and employer; and anticipated travel dates (Regulation (EC) No 1987/2006).

Interestingly, while some systems, such as the SIS II, can include data and issue alerts regarding EU citizens or property (e.g. vehicles), the delineation between 'citizen' and 'non-citizen' is apparent; to this point, Article 30 of the Regulation establishing SIS II prescribes the erasure of data on individuals who acquire the citizenship of a Member State (Regulation (EC) No 1987/2006). Removals could imply the systems are biased to favour citizens; amplified to data-driven decision-making, the collection of information is thus incomplete and implies TCNs pose a disproportionately higher risk and threat compared to citizens with concern to matters of internal security. Randomness or irregularities in data samples can also predispose data-driven intelligence and technological tools to particular biases (Mehta, Shah, Patel, and Kanani, n.d.).

The example highlighted above is also an illustration of sample biases in border control practices; indeed, by redefining the dataset once an individual becomes a citizen, the data sample for a data-driven approach might no longer depict accurate threat levels. Finally, measurement biases occur in the parameters or the "features we wish to incorporate" (Mehta, Shah, Patel, and Kanani, n.d.) into systems (Bollier, n.d.). Measurement biases alarmingly manifest when data is employed in AI-based algorithms and systems. AI algorithms assign specific 'weights' to specific parameters in order to compute functions that explain the correlation between input values and output results (Waldorp, n.d.). This is best illustrated by way of another example; in this case, a given database stores input information regarding nationality, sex, and the type of visa application (study, work, business,

etc.). During the 'learning' stages of AI, algorithms attempt to compute a function that connects this training input data with the outcome data, which is in this instance visa application approval/denial. If the sample of training data includes more female applicants whose visa applications were rejected compared to their male counterparts, the algorithm might attribute more credence to this variable as an indicator for a future female applicant's approval or, more likely, denial.

Looking to fairness, mindful that the definition changes over time in line with societal views and priorities (Sylvester and Raff, 2018), database designers, software developers, and the AI field adopt "various methodologies that reify fairness as a social concept into fairness as satisfiable technical criterion" (Green and Hu, 2018) or define the concept by a statistical metric. However, even reifying fairness to statistical metric fails to account for "intuitively constructed data association rules that (…) are coded into the software supporting the functioning of databases used by border guards" (Bellanova and Glouftsios, 2020). This argument implies the work of programmers and database developer's influences or has consequences for future risk flags or warning indicators (Bellanova and Glouftsios, 2020) that are used to process travellers' data and inform the proper stakeholders. Here, it can also be argued in several democracies, there are increasing demands for transparency as a surrogate for fairness.

The extent to which fairness then exists is compounded by the "black-box" nature of data and AI algorithms (Goodfellow, McDaniel, and Papernot, 2018); stated differently, in databases, the human being is reduced to the particular data attributes or "parameters" they possess, such as "sex," "nationality," or "occupation." Neither the weights assigned to these parameters, nor the "thought process" and decision-making of the algorithm when processing test data is explicit. In the context of border security, for example, a lack of transparency in decision-making makes it difficult for the issuers of visas to explain the reasoning for application approval/denial and even more complicated for applicants to file an appeal. It is additionally recognised that current border control and wider surveillance and mobility measures themselves "are unequal and do not target the same people in the same way. They reinforce the advantages of some and the disadvantages of

others, even if sometimes they have contradictory and unpredictable effects" (Bigo, 2006). At border checkpoints, discrimination can emerge when individuals are singled out based on their appearance, behaviour (ETICAS, n.d.), citizenship or nationality, or many other criteria. This can result in greater suspicion and scrutiny, longer questioning, additional checks, or undue influence in denying/permitting entry/exit. Where Big Data and data-driven intelligence come into consideration, it would be further unfair and unethical to categorise and segregate individuals on the antecedent treatment of other travellers who fit the same appearance, routine, citizenship, or nationality criterion. This reinforces discrimination and unfairness under the guise of evidence-based objectivity.

Missing the Big Picture

A related, second limitation of employing Big Data, data-driven intelligence, and AI for functions of border control and security is a lack of context. While data collection procedures, intended purposes, and interpretations are subject to human bias as demonstrated above, the raw facts themselves are taken out of context, ignoring a possible degree of significance. Elements such as "female," "loop right thumb fingerprint," "Italian citizen," or "date of birth 8 August 1987" alone do not offer value; it is the wider contexts, analysis, and human explanation or judgement that offer meaning and allow the transformation of data into *intelligence*. Big Data, data-based technologies, and data mining have supported the deconstruction of human beings into data elements, the amalgamation of which forms a person's "data double" (Galič, Timan, and Koops, 2017). In an era of surveillance increasingly reliant on data and ICT infrastructures, human beings are perceived as *assemblages* (Haggerty and Ericson, 2000), or "devices hosting opaque flows of auditory, olfactory, visual, and informational stimuli" Galič, Timan, and Koops, 2017). For border matters, the development and deployment of risk assessment instruments are reliant on Big Data, AI-algorithmic capabilities, and these *assemblages* can pose serious ethical and security related concerns. Risk assessment instruments are tools that use the multiplied

product of the probability and the expected adverse effect of a societal harm (Paul, 2018) to compute a score or degree to which individuals pose a threat to society. Integrated in mobility and migration matters, pre-arrival vetting in the form of background checks, visas, permits, and risk assessment profiles are all techniques used to support decision-making on minimising threats internal society.

Increasingly common in other fields, such as criminal justice throughout the stages of pretrial, trial, sentencing, and parole (Duwe and Kim, 2016), actuarial risk assessments are presented as fair and objective. Indeed, the *raison d'être* for using statistical and actuarial methods in these contexts is to "prevent racism, sexism and other forms of discrimination that can be part of discretionary decisions made by humans" (Dekkers, van der Woude, and Koulish, 2019).

In recent times, access to larger batches of data supports improvements in AI and AI-based risk assessments. To generate these assessments, AI algorithms detect patterns between input data and outcomes by adjusting the weights of certain criterion or data categories (such as age, gender, race, nationality, criminal history) (Dressel and Farid, 2018). The result is AI algorithms develop a proposed function of causality; subsequently, when new data is subjected to this function, software seeks to detect similar patterns and compute a rank or score detailing the degree to which an individual poses risk to society. However, lacking external context, these tools can impair decision-making or have wider ethical and legal consequences. To demonstrate is an example of a TCN in possession of a short-term tourist visa during the COVID-19 lockdowns beginning in February-March 2020. While some were able to either return to their home countries or extend their right of stay in a given country due to travel restrictions and bans, this particular TCN was unable to return home or exit due to limitations in flights and the number of homebound returnees permitted entry; furthermore, with the rapid and prolonged closure of embassies and consulates, attempts to obtain consular assistance or visa extension proved futile. Database entries might demark this individual immediately as *illegal*, having overstayed their visa. In the short-term, alerts might be triggered for border and law enforcement officials. In the long-term, the TCN might, therefore, face

future barriers to mobility, extended checkpoint screening, or visa application rejections; as such databases and alerts might lack the contextual hampering effects of the external environment.

Risk profiles can also be generated for individuals who, in themselves, are not the direct subjects of inquiry for border and security concerns. With SIS II's ability to create links between people-and-people and people-and-objects, the system might detect links between a person about whom intelligence is gathered and an object for which an alert is issued (Bellanova and Glouftsios, 2020). These technologies also construct networks of relations, such as travel groups or family members; in practice, "If an alert is issued on one member of this 'network,' other members are automatically controlled too. Thus, an alert affects more than the concerned file" (König, 2016). However, these additional uses and perceived benefits of technologies can be caveated by the inherent collected (or uncollected) data, the lack of circumstantial information, or, in some cases, infringement on human rights. In the former illustration, data not collected might be that the car's owner reported its theft to the police months prior; in the latter, even if the only linkage between individuals is a day-tour group, the attributed linkage might disproportionately affect innocent parties. It can be argued this practice contravenes European fundamental human rights (European Court of Human Rights and Council of Europe, 2012) as it evokes the "surveillance of third parties who did not, for themselves, cause a reason for being surveilled" (König, 2016).

An All-Seeing Eye

A final limitation is the challenge of the extent to which past data serves as an oracle to presage the future. For risk management purposes, this is the use of Big Data and AI tools to support a form of pre-emptive governance that arguably "grants databases the 'power to predict' events" (König, 2016). Currently, the accelerated scope and speed of Big Data—through networked computing power, profiling, and data-mining (Broeders and Hampshire, 2013)—debatably enable better-informed decision-making. Complications surface from two caveats inherent to Big Data and AI and three assumptions about their

deployment in supporting decision-making. The first caveat is the temporal stationarity of data. Data is ephemeral, capturing a specific moment in time. Concerning border control, an example of this caveat is the retention of vast amounts of data in databases, which requires continual maintenance and updating (Bellanova and Glouftsios, 2020) to reflect dynamic individuals and circumstances. In addition, input errors, in the form of incorrect data entry, or a failure to input the most recently collected data, can result in particular depiction that might or might not be accurate. For instance, an applicant seeking international protection might be permitted temporary stay in a Member State and later granted permanent residence. If databases such as EURODAC are not updated, the applicant's residency status remains static and outdated, effectuating possible serious ramifications.

The use of historical data also underlines the second caveat to Big Data and, in particular, AI, which is envisioning static, past data as relevant for the present and future. Phrased differently, there is a reliance on expectations of continuity (Bennett Moses and Chan, 2018); AI models in particular seek to detect "historical correlations between features and outcomes…applying those correlations to new data under the assumption that those same correlations will apply" (Green and Hu, 2018). This issue is again prominent with the development of risk assessments. In addition to lacking contextual information, risk assessments might prioritise past, external data, opposed to current data. In an oversimplified example, a data sample includes 1000 individuals attempting to pass border checkpoints in a particular Member State, 500 of whom were permitted entry and 500 of whom were denied entry. Of the 500 individuals denied, 400 were of a certain sex and nationality.

If Big Data and AI-driven technologies undertake similar border filtration mechanisms in the future, when an individual of that same sex and nationality attempts to cross the border, the technologies might conflate the person's correlations (sex and nationality) with historical outcomes (denied entry) rather than analysing the individual's particular current data and circumstances. Also relevant to risk profiles and actuarial tools that aim to assess individuals' risk level, such profiles are underscored by "assumptions concerning the possible

future, or more exactly the belief that the intelligence services have a grammar of '*futur anterieur*'" (Bigo, 2006) that technological profiling equates to foreseeing the future clearly (Bigo, 2006). In another simplified example, a set of data might indicate for the past five years, migration has increased two-fold at a particular checkpoint; this data alone might urge decision-makers to allocate additional financial and personnel resources to assist. However, as witnessed primely in the first six months of the COVID-19 pandemic's ramifications on halts in mobility and restrictions on movement, the present was not characteristic of the past; further, it might be dangerous then to assume because of those drops in border traffic, a trend of lower mobility will continue, and thus those financial and/or personnel resources are no longer necessary.

This last example highlights again not only the challenges where Big Data lacks contextual insight, but also where there is undue reliance on the past as foretelling for the future. Thus, Big Data and AI-algorithms are invariant to permutations to ground truths. Three salient assumptions further underscore these tools and their use for predictive purposes; first, that it is possible to use technologies to predict crime (van Brakel and De Hert, 2011). Second, by anticipating "the likelihood of an individual with a particular profile experiencing a negative outcome, interventions targeting specific issues can be put in place ahead of time" (Ting, Chu, Zheng, and Chng, 2018).

Lastly, that terrorism, crime, and other security concerns can be reduced by intervening, screening, or barring individuals from mobility opportunities, opposed to resolving wider social conditions or environments that might enable or foster such behaviour. A principle borrowed from risk management underscores this final assumption: the system is only as strong as its weakest link. Given enough time, resources, and motivation or intent, an adversary will find gaps or loopholes in security in order to find a way in. For border security, this implies that while strict rules and procedures, state-of-the-art technologies and systems, and severe legal consequences might deter a degree of terrorist or trans-border criminal activity, striving for total elimination of security threats is futile.

A State of Emergency

Alluded to and illustrated throughout some arguments thus far, the COVID-19 pandemic serves as a notable case study. The pandemic exposed several of the aforesaid security concepts and impediments to data-driven intelligence for border management. At the time of this writing, it has been approximately one year since the first virus cases appeared; the below documents some of the challenges of the pandemic and actions taken in light of it from the start, in February-March 2020 through to the present moment. It is thus written as dually a reflection and ongoing account.

While the pandemic has ramifications around the world with many rippling effects across borders, the impacts are not equal; populations were disproportionately affected in innumerable, different ways. As this paper focuses on issues of border control, it looks at some of the consequences to relevant parties. In the wake of security threats, such as terrorist attacks, epidemics and pandemics, or other extreme circumstances, one line of thought contends "The first move of any government that considers its survival threatened is to close its borders and detain foreigners. This is not new" (Bigo, 2006).

While the unprecedented circumstances posed by the rapidly spreading COVID-19 virus did not necessarily include detainment at the onset, some foreigners faced increased social prejudice and stigmatisation, alienation from within the region of their location, and in some instances, abandonment by their own national governments. The costs, financial and otherwise, to travel home soared exponentially; altogether, exorbitant transportation prices, increasing demands for a seat, dwindling numbers of transportation options available, and health and safety risks made (and continue to make) it difficult for some to return to a country of permitted residence, while for others, near, or entirely, impossible.

Following the systematic and prolonged closures of borders, foreign consulates, embassies, and citizen services, and interior ministries and agencies, some TCNs in particular found themselves with expiring visa-free regimes, visas, and permits. While in the early months some countries offered options for extending the right of stay

due to the extenuating circumstances, for some TCNs these communications were unknown or unclear, or governed by additional sets of rules, procedures, and exceptions of which they were not well-informed. Some applicants with pending applications for international protection or asylum suddenly found themselves stuck in dangerous situations and unable to move to safer environments. When attempting to travel home or transit to other countries where they were permitted legal stay, some faced discrimination at checkpoints or refusals for entry. Real-world manifestations of "social sorting" and the Ban-opticon were apparent in the categorisation of individuals based on factors such as nationality, citizenship, occupation, and purpose of stay, coupled with blanketed bans of certain populations and increased "monitoring and tracking of individuals or groups" (Galič, Timan, and Koops, 2017). In addition to these difficulties, there are increasing challenges for the current and future database systems, border control authorities, law enforcement, and policymakers. Current datasets are reliant on historical (i.e. pre-pandemic) data and lack the contextual affordances of the exceptions and changes to areas of migration, law, criminal justice, and security. In this sense, it can be put forth the explanatory value of data and data-driven intelligence that includes (or does not include) human intelligence, subjectivity, and judgement must be duly taken into consideration in current and future action and policy.

Concluding Remarks

This paper has attempted to discuss some of the underlying challenges inherent to Big Data, data-driven intelligence, and artificial intelligence employed in the context of border security and intelligence. In doing so, it aimed to raise awareness of the limitations of data bias and (un)fairness, a lack of context, and dependency on the past for future prediction and action. It is pertinent to also account for potential consequences; indeed, these might be irreconcilable when used to inform decision makers on matters that have profound ramifications for individual human lives and the whole-of-society. This is not to say that there are no benefits to Big Data and its use in intelligence applications. On the contrary, there are numerable benefits that can be realised by

employing Big Data and AI on the road toward improving intelligence capabilities and organisations. These benefits can also be reaped and enjoyed by external stakeholders, including travellers, border guards, law enforcement authorities, consular officials, and strategic organisational decision makers and policymakers.

However, in the transformation towards data-driven intelligence, it is in society's best interest to be mindful of pitfalls in data and technology, which are often not afforded careful thought and well-rounded critique. While seen to be increasingly removed in current times, it is important not to eclipse the role of human intelligence in many of the aforementioned applications. Indeed, decision-making, especially when the stakes are high for individual lives and internal and external society, remains a human endeavour. The human-techno nexus should be a relationship where Big Data, AI, and other technologies perform supporting functionalities rather than a driving role. As well summarised, "The real world can be complex and many situations need careful consideration and the weighing of possibilities by human beings because 'the nature of service provision calls for human judgement that cannot be programmed and for which machines cannot substitute" (Dekkers, van der Woude, and Koulish, 2019).

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#INCEPTION –

INTERCULTURAL STUDIES: BRIDGING THE GAP BETWEEN NATIONS THROUGH COMMUNICATION

WHEN TECHNOLOGY AND SOCIAL MEDIA MEET COVID-19. RELATIVIZATION OF THE TRUTH AND THE FATE OF SOCIAL MEDIA

Iulian CHIFU*

Abstract:
Technology has been embraced by the human kind very quickly, including social media, but studies on the impact of technology and social media on the human being and the society have never been achieved. Some side effects have been considered vulnerabilities and used for information warfare, using fake news and disinformation. When the Covid-19 pandemic exploded, in March, 2020, the combined impact of the two did create a real perfect storm, with important consequences for the international relations, global security but also for the intelligence activities in times of crisis.

Keywords: *Fake news, information warfare, disinformation, relativization of truth, post truth, post-factual, post sensorial.*

Feelings, emotions, beliefs: shading the rational thinking

There is an abundance of questions, I named them **the Whys**, which are just telling us how little we still know about **the impact of technology, information war, fake news** on our minds, on our behaviour, on our day-to-day life. There are no strict and complete answers, but the Whys are opening avenues for research. And some hints we already possess and some studies are already on the way. The impact of technology and social media as well as the impact of the pandemic are of tremendous importance – even though the studies refer just to the first wave from March-June 2020 – on the human being, the society, the political life and democracy. This is not to excuse

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previous societal evolutions and pre-existing rifts inside the democratic societies which cannot be put only on the crises of the last years, but on a whole evolution that has led here.

There is a number of Whys on the table, and some more consequential to our first responses. But we are going to focus on the most obvious ones: Why do we accept fake news (altered information)? Why don't we identify the fake news? Why the explosion of disinformation right now? Which are the mechanisms of our human mind that make us ignore even the obvious, when we know it is not the truth, it is not the factual reality, but it fits our interests and our will? All this reality is also altering the basics of intelligence and we need to pay attention to this evolution, relativization of truth and disinformation 2.0., meaning altering the reality perceived through the very basic human senses.

The reality of this acceptance comes from a lot of processes, but the first and most important one is linked to emotions. Any human being is defined by emotions, and those emotions are like drugs, able to shade away the rationality, to put under anesthesia our critical thinking and to make us believe what we know is not true. On the other hand, yes, there is a lot of information that we don't know is fake, we take it as such and consider it true, even disseminating it, with the credibility that we have in our own circles of "friends" on the Internet.

Dominique Moisi was the one making a chart of the fundamental emotions, using a psychological postulate that any emotion is a composition, in due quantities, of the three fundamental ones - Fear, Humiliation and Hope (Moisi, 2010). Attributing a certain dominant fundamental emotion to a category of people in the world enabled him to solve the most important criticism to Samuel Huntington's book on the Clash of civilizations (Huntington, 2002), about the borders and artificial lines of demarcation of the civilisations. For Moisi, all those emotions could be at the same place, defining different people.

Emotions are the ones able to change our rational behaviour. It is well known, and there is a lot of literature in this direction. Dan Gardner has made an excellent overview of the feelings and their relation with the emotions, the sense of Danger to the Herd that could export emotions to a group, especially Fear, trying to describe the

Chemistry of Fear, and the extreme fear, terror, analysing the context and perspectives of those Terrified of Terrorism (Gardner, 2009). Playing with feelings, creating reactions and using the human minds in order to distort the (assumed) reality – or at least put an emphasis on a needed aspect – could alter dramatically the rational block of the human mind, even at the group level.

Social media plays and important role when it is up to the echo chambers and information bubbles. Emotions are exacerbated via the lack of public space and the gathering of like-minded altogether. The opposite arguments are missing, there is no debate, and we are no longer in a public space, so even democracy is faked. We just have one and the same idea presented with full speed and aimed at prompting the required emotion able to create a general rejection of any argument that doesn't fit our thesis and beliefs. Yes, these emotions and feelings move closer to the religion and the beliefs: they don't need any proofs, evidence, argument, we just Believe in the narrative of the group because we Feel it is right, and it gives sense to our Emotions.

The mechanism is to be analysed thoroughly by psychologists, social-psychologists, sociologists, as well as communication experts to realize how this is possible to act, to obstruct and to transform the rational thinking. We have some ideas already developed. A major error is the one related to the perspective and dimensions of each issue that concerns the society, or even the agenda brought to the attention of the public (by the media, the officials, the social media). If you look at only one thing, it seems to fill all the landscape and to capture the full interest of your view.

This error of perspective can also be speculated by the conspiracy theories that are taking the public agenda labelled as "Official" and try to drag you in an alternative world, in an alternative reality, in the social media groups that are offering a different agenda. But this is not always the "objective" or "independent" one, but covers the needs and interests of different groups, including those of the offensive foreign countries. You have to take the real perspective and approach it in a rational manner, using critical thinking and fact checking, in order to realize who's profiting from your time and attention on a particular issue.

Sometimes, the subject at stake fits into your area of interests or expectations or, even more, the subject touches upon some very intimate emotions and feelings of your own, dragging you in the group and keeping you away, eventually, from the opposite arguments and from the real pragmatic thinking on the issue. And it is not only about the subject that needs to be "sold" convincingly, it also needs to be assessed and addressed in a right way, in a professional approach, in order to attract new followers, new believers.

Can we do everything with the information war (fake news, disinformation, propaganda)?

The big debate is what was first, the egg or the hen? The problems inside our societies speculated and amplified by the information warfare or the information warfare that projected alternative realities on our societies drag out from the mainstream pieces of the societies, groups and followers of those "new religions" based on emotions, feelings and fake news. Once society is exposed and "prepared" with the existence of those groups, once the isolation during a pandemic is pushing more people to the social media and for a longer time, after the social media itself splits the society into pieces and divides the public space, it is easier to forge an information warfare against such a democratic society, taking advantage of the principles and values that it defends, including freedom of speech and free flow of ideas.

Critics are coming from both sides. Presuming that propaganda can do anything in any society is a false axiom. Moreover, if we put the blame for everything that goes wrong in our societies on the information warfare, propaganda, disinformation and fake news, we miss the point. We risk ignoring the real social tensions, divisions and rifts inside our society that we need to address and solve for the health of our societies. Having in hand the information war and fake news, this could make an over-confident government and raise the effectiveness of propaganda if we do not make a correct monitoring and overview of the real problems and concerns of our society.

We know for a fact that perception can replace reality. Once established via a general perception, a "perceived reality" cannot be shaken by any argument. It happens when communication is missing or is badly conducted and the public lacks trust in a leadership on a badly promoted specific issue. It happens in times of crisis when solving the crisis but not communicating with the public can make the decision-maker lose his job. On a different note, the so-call Thomas Theorem tells us that a false fact perceived as real could become real through its consequences. It produces real consequences, even if there is fake news at its origin (Dungaciu, 2017, p. 11-17). As is the case in logics where a false proposition can lead to a true one through rational thinking.

Moreover, the context can create the effectiveness of the false. Pre-existing trust crisis, or credibility crisis in the state and its institutions, in the political leadership or a professional one in a specific discipline, leads to the real crisis from fake news or false premises. The lack of trust and lack of credibility of the official decision-makers creates premises for a larger share of the population to believe and to trust fake news or what people hope, or expect, or believe, or feel. Critical thinking and rational approach are put aside. On the contrary, when a large number of individuals trust in institutions and state, fake news and information warfare lead only to an insignificant number or an irrelevant or non-representative effect (marginal) of the fake news introduced. But what we have discovered is that any lie, the most unbelievable one, always has a public. A tiny, irrelevant, marginal one, but a public nonetheless (Chifu & Nantoi, 2016).

That is how we can build the resilience of society against fake news, propaganda, and disinformation: by good, timely and credible communication with a high level of trust in its representatives, leaders and elected or appointed officials. A leadership expected to be interested in the public's trust and with concerns and policies that really reflect hopes and expectations, as well as the true capacity of the society to solve those issues. This leads to matching the leadership and the political elite with the natural and professional elite of a society, at least. It could not be enough, especially when the level of expectancy is higher than the one the society could provide or offer.

Fake news cannot change the reality *per se*. But it could definitely influence it, amplify some trends. Fake news could benefit from pre-existing realities, difficulties, rifts and divisions in a society and amplify them, but it cannot change the reality. People and individuals need to trust somebody, to put their trust somewhere. If you do not believe and trust in your society, your political leaders, then you might trust in the source of fake news (including "my friend" from Facebook). The lack of trust in the official narrative creates the avenue for information warfare.

Trust can also come directly from the lack of hope that a government or a leadership as a whole is offering to the society. People need hope so if they don't have any hope coming from the political class of their country, they are inclined to find this hope somewhere else. It is also about fundamental emotions. People will go where somebody offers hope, because they are expecting a different outcome than the gloomy or dark one that can be predicted by the leadership in crisis situations. That's the pandemic case. The need for Hope makes individuals look for alternative narratives, even if there is only fake news, stories or sweet lies.

Vulnerability and the lack of resilience in the face of information warfare come from a low level of trust in institutions, elites, or the national founding myths. This makes a whole society vulnerable to those acts of information warfare, or to disinformation or to foreign propaganda, that stress your disbelief and makes even worth the situation, in a spiral of disbelief. Therefore, we cannot ignore the sociological approach and knowing the real issues of the society that need to be addressed first, then we can deal with the fake news, disinformation and propaganda, the information war unleashed upon our society. It is first a sociological driven issue, before being a communication technique problem.

The Obsession with propaganda could become propaganda in itself. It is filling the space of a rational responsible for crisis, other than the leadership of a country, with the blame on an external factor. Transforming everything in propaganda, blaming that everything is propaganda means not identifying the real propaganda, missing the real information aggression. But this also means avoiding tackling the real

social problems of a society. Nuances are always necessary. So sociology is back on track and desperately needed to support the political leadership. And I mean sociologic qualitative research, not only superficial qualitative questionable polls. A study on the situation of trust, the Whys of the public disbelief in the national leadership, especially the political one, is necessary before beginning the crusade against propaganda and information war.

The nuances and sophistication of Disinformation 2.0

If we are used to discuss fake news, disinformation and propaganda, elements of the information warfare, in a very black and white format - it is either true or false – the Disinformation 2.0 comes with a lot of nuances and a high degree of sophistication. It is no longer easy to prove each of the attributes - true or false - so it is difficult to deal with the fake news of this generation, linked with altering the information coming from senses of the human being. Nuances are as important, because they need far more steps to prove each value. Fake news is neither true, nor false. From completely false to untrue there are 50 shades of grey. The reality is no longer only black and white.

Disinformation 2.0. is a mixture of true and false in different doses. As much as the false part is less perceivable, the story is better constructed and the fake news/disinformation/propaganda (equivalent terms somehow) are more difficult to expose. And it is not only about this in a story, but also about some other ingredients of a subjective substance like observation, impression, feelings, perceptions, opinions of a witness. That leads directly to the post-truth era.

Surely, information war is neither immaculate in scope, nor impeccable in logic, truth and presentation of the facts. So it is not only about the vulnerabilities of the society. It is not innocent and some of the actions influence the environment itself, preparing it to become receptive to the future actions of the information warfare, with a higher rate of impact. It is an aggression on our societies, it takes advantage, like all other components of a hybrid war, on the characteristics of a liberal democracy, on the principles and values that we cherish and defend, including freedom of expression and freedom of the press.

And this comes from creating a complete mess about the truth, as already underlined before. Who owns the truth? Who says what's true? What is the value of knowing what is true and false? Therefore, we are living in times when there is a complete relativization of the truth. The real question now is if: Do you believe me or not? You do not need any argument or reference. Actually, the disinformation 2.0. destroys references, criteria, and arguments. We are placed somewhere between "the truth and false are equal as importance and moral relevance" (Nietzsche) as in the logics, and "the truth is what I am telling you the truth is" (Gobbels).

As a result, fake news becomes completely different than false news. News could be counterfeit, credible, plausible, not only false, in order to be fake. There are nuances. Disinformation 2.0. is a plethora of nuances of grey inside the truth, not the nude false. Propaganda, disinformation, communication errors, moral panics, inuendo, collective hysterias, intoxications, diversions, conspiracies, partisanship, all are parts of the information warfare. They are Old and New. But the means in hand as of today are different. Information, disinformation, persuasion, propaganda are parts of the story with different instruments attached and different values of the truth (Bârgăoanu, 2018, p. 133-139).

Fake news is a term present in the 19-th century English vocabulary. The term exploded when it was politicized. Donald Trump played – (an important?) role, by labelling CNN and mainstream media as fake news (hiding information inside a lot of noise), then, in 2018, establishing the prices for fake news!!! Nowadays, the term has been politicized and has a larger area of use than the original concept. Fake news becomes an umbrella term for nearly everything. With the politicization, fake news has become equivalent to hostile approaches of the media that we refuse to acknowledge, interpretations that we disagree with, and points of view that are detrimental to us.

On a different note, there is an important part of society which thinks that Fake news is a motif for censoring the freedom of the media, an opportunity to limit the freedom of expression. And here the fight against fake news needs to pay attention to the perception of the population, and to find genuine and largely accepted motifs for limiting

the freedom of media or of expression. It is the case of hate speech, verbal violence and tarnishing the image of a person.

As we have seen, Fake news is a name/label that could be attributed to everything we disagree with. It is indiscriminately used especially for not identifying the "real" fake news. It becomes an excess through politicization and generalization. A strategy aimed to undermine the credibility, to discredit everything, or at least to question the genuine truth. In the discipline of semiology, we are talking about a pair – signifier and signified – the name or label of a word and its content, substance. A way of building fake news is either to mix them, or to alter the substance of a concept. In the end, all leads to undermining the trust in what is real, obvious, concrete and visible around us. It leads to a perfect relativization of all things.

Everything begins like in a soap opera – stories inside stories that turn apart the hero and the villain, the bad and the good. It is a work of the relativization of good and bad and the story helps make an inter-changeable role. The bad becomes the good and vice versa. And that is the ground for high uncertainty. That is how we begin to build conspiracy theories – stories incredible but needed for being able to shift good into bad and bad into good, or at least to add more nuances into each of the actors so that the result does not distinguish between the hero and the villain. That is how conspiracy theories begin to be acceptable and are even welcomed in such a milieu, used to consume soap operas. Under stress, in times of crisis, it becomes even worse.

Yuval Harari said that Homo sapiens is a post-truth species (Harari, 2018). Its survival is dependent on creating and believing in fiction. This is partially true, since sophistication multiplies the nuances of the truth and that of the false and makes it more difficult to deal with fake news. An old phenomenon coupled with new technologies - social media, metadata, algorithms, virtual platforms, artificial intelligence, and research engines – changes society directly. How does this happen? We don't know all the consequences and mechanisms of the impact of social media on society and the individual. But we need to quickly realize where we go from here.

The basic approach of the EU is that Disinformation means intention. I am not very sure that even in this field we can be so drastic.

Disinformation 2.0. can use pieces of intentional information, warfare techniques that are taking advantage of vulnerabilities already created in a society and some parts of disinformation without intention (or mal-information, as it is labelled). Even the side effects of political campaigns or electoral ones in a society can create good grounds to emphasize the vulnerabilities of a society or the fractures in the societal cohesion and allow an intentional disinformation 2.0 campaign to be much more effective when needed, in an information war that is not always linked to a conflict or physical war.

And this is not without consequences. As Condoleezza Rice put it, the political risk comes from everyone with a cell phone/photo camera/social media profile. It is a new type of media channel, better fitted to exploit any story with an ideological component or political issue inside (Rice & Zegart, 2018). Since business is close to politics once more after the change of geopolitics, after the Cold War, and people have enough knowledge and numerous precedents, it is easy to transform everything into politics and shake the government.

It is not really like that: politics embraced the agenda of the NGOs first and moved all issues to the political stage, politicizing the agenda and democratizing the society as a whole. But not all the pieces of this agenda are interesting to the population, in their politicized form. Then, a government could not be shaken by practically everything, if it is not in the immediate attention and does not fill a need or an expectation of the public. In other words, we need to have at least the context prepared and the trust in the leadership shaken before moving to action. If not, the impact would be meaningless, as reported before. But the fact is that megatrends in politics, business and technology did transform political risk, making it more diverse, pervasive and consequential (Rice & Zegart, 2018, p. 10).

Complementary issues and research avenues for contemporary information warfare

Information war/warfare leads us to some other complementary issues that need to obtain suitable and comprehensive answers in order to help the research and make sense of the issue. There is a lot to do in

an interdisciplinary approach and the difficulty relies on those matters. That is why we also seek to present some parts of the reality where there are no answers or the research level is still incipient, with no convincing results in place.

A first area of research is the one related to fake news, false news, deep fake. This relies on the capacity of our senses to determine and establish the truth, the realities and facts. When the senses create fake news, we have a big problem. Especially when it is about our view which gives us more than 80% of the information. We saw images that prove not to be true, to be misleading and to create fake news. When we can no longer rely on our natural senses, as humans, we have a level of relativisation of the information coming from our natural senses that is no longer acceptable, and a big part of humanity can no longer cope with this level of relativisation.

The Coronavirus and the sense of danger have already been evoked here. To what extent there is fear and terror when thinking about the Coronavirus, it is difficult to realise today. Sociology could help us understand where distrust related to the Coronavirus pandemic comes from in our societies. If the level of impact of the illness on the human being is less important or perceived as comparable to the normal mortality in the human society, we could be used to accept it and reject inconvenient measures taken by our officials in order to cope with this crisis. It is similar to death during war times or death from traffic accidents: even if the impact is high, nobody refrains from driving.

Another part of the needed research belongs to Rhetoric. It is a science that has been marginalised or forgotten. The great speeches of our time are full of content and creative wording that cross the years and eras, and are still quoted. Now, populism needs to be addressed both from the charismatic angle of the personalities and from the rhetoric point of view and the natural abilities to make great speeches at any moment.

Communicating feelings and emotions, not only stories, is also an ability that needs to be observed and studied. We need to look into the ways and means to fulfil the expectations of the public and realise how the acceptance of obvious and visible untrue messages or direct lies

happen for rational individuals. An interesting start could be the one coming from Donald Trump's ability to build very vivid stories, when describing a captivating scenography for his fantasies, that makes the public trust him and be more fascinated by the teller and by the story itself than to reject the false claims and factual lies from his imagination reproduced in words.

We have laid down below some parts of the StratCom[1] instrument, the strategic communication fighting fake news, the way that our governments and the international institutions are taking it. This is not enough. We need some more effectiveness in our reactions, also some pro-activity, when it is about penetrating and influencing the bubbles and the echo chambers or trying to combat with our tools the populist success of communicating via the social media, especially during the pandemic.

Countering information warfare also needs to be done in connection with offensive instruments, tools and techniques. If we cannot share the experiences when working in that part of the information front, we will not be capable of reacting to the art of influencing. The manipulation techniques are known, to a large extent, but there is a great deal to be learned and researched on the capacity of changing the shadows in a scene in a given playground: How you set the light on a scene so that it becomes *trompe oeil*[2], falsifying the view and the direct perception from the eye and the view sense. Once those techniques are realised, we could see how they act in order to shape fake realities that one could absorb via the senses, giving a huge amount of credibility.

Last but not least, a full research should address the way democracy has evolved without a proper and genuine public space, without a real debate, in a fragmented information space, decreasingly transparent and public. We have less and less the sense that we are sharing the same information that we know is true, less common knowledge about our day-by-day life, and this lack of common

[1] NATO Strategic Communications Centre of Excellence (NATO StratCom COE).
[2] Trompe oeil meaning fooling the eye: your view is not transmitting the reality, but the apparent image it sees at one point.

information and lack of debate, of thesis and anti-thesis, discipline of dialogue and arguments, rational approach and critical thinking and too much influx of feelings and emotions are altering democracy. If we add the areas and means for relativization of the truth, we are reaching some limits where our whole democracy needs to be reset, adapted, updated to the new Disinformation 2.0 world.

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BREAKING (FAKE) NEWS: AN ALTERNATIVE TRUTH

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Abstract:
Today, the traditional role of the fourth estate is overshadowed by an offensive phenomenon: fake news. The term – popularized by the former US President Donald Trump – highlights that, nowadays, concepts such as truth or precision may undergo adjustments or interpretations. Some of the reasons why people create fake news are to make money, to deceive or to harm, to influence other people, to cause social disruptions and so on. Among those who create this type of content are a) those journalists who turn from gatekeepers into moneymakers; b) other public persons who use fake news to denigrate other people; c) useful idiots – those naive or credulous people who promote fake news without actually understanding the cause's goal; d) trolls – people paid to create and share fake news in social media, and promote a certain agenda in order to influence other people; e) bots – automated software agents that have a political agenda and try to manipulate via propaganda and fake news. The spread of disinformation through social media has a direct link with phenomena such as ideological polarization or segregation of online users. To stop the fake news phenomenon, it is necessary to focus on transparency, confidence, and media education.[1]

Keywords: *COVID-19, Knowledge production, Knowledge society.*

News, friend or foe?

Strictly speaking, a news story is either a report of a recent event or an addition to a story of public interest. However, its definition remains broad, as efforts to explain, in detail, what is involved in

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[1] An extended version of this article will be found in the PhD thesis "Manufacturarea adevărului. Fake News Made in Romania – de la stabilirea agendei la profilul consumatorului de știri".

writing or obtaining it would not define exactly what a news story is (Zelizer, 2008). Until an agreed definition is developed, the determining factor in the process of conferring news value on an event remains the journalist: while "news is a social construct, an object, a commodity, its value is a cognitive construct, a mental evaluation" (Shoemaker, 2006, p. 105).

Traditionally, through the news it disseminates, the media aims to satisfy the public's needs for information and entertainment, "creating a way of life and being defined according to the interests, aspirations, values of those involved in public life: an instrument for transmitting information, a mirror of reality (...) a megaphone for public opinion, an instrument that encourages dialogue on public issues (...)" (Bârgăoanu, 2006: 19). If yesterday, media such as newspapers, radio or television were the traditional ways of transmitting news to citizens, today, information is increasingly present in online, as the Internet "has dramatically changed the communication environment by introducing new communication channels – e-mail, online publications, websites (...) –, which have changed the communication behavior of millions of people around the world" (McCombs, 2005, p. 544).

These days, you can hardly talk about "real news" with a capital R. The news cuts out a certain part of reality, interprets it, frames it, and places it in a context (Bârgăoanu, 2018, p. 137-138). *New media* offers a different perspective in approaching news: a publicized subject can be known and understood without the mediation of a journalist – the news consumer can intervene and express himself directly, from a click away, on a subject. An individual, via the free expression of the online environment, can make judgments, become visible in his virtual circle of relations, influence other Internet users and become an opinion shaper. This title gives him the "power" to guide, induce panic or error, deceive, influence the decisions of masses of people, etc.

The advantages of the new media, which include this unfiltered expression, also have their downside: the "amplification of various types of disinformation", which potentially pose a risk to democracy, national security and society (HLEG, 2018, p. 10).

Today, the traditional role of the fourth estate is overshadowed by an offensive phenomenon: *fake news*. A phenomenon which since its

inception has underlined the fact that, in a modern age, concepts such as *truth* or *accuracy* can be subjects to adjustment or interpretation. Faced with such a challenge, the journalist has to fulfil (at least) two tasks: a) to present the facts as accurately as possible and b) to engage in a 2.0 process of filtering information.

The shrinking number of advertising spaces, the shrinking number of newspapers or their move in online, the limitation and, also, the loss of jobs in the field are contributing, day by day, to the degradation of journalism and the reduction of possibilities to verify, certify and filter correctly the information. All of this, cumulatively, allows for the development of the harmful phenomenon of fake news (Pritchard, 2017).

Fake it till you make it: a historical perspective

It's not from today, it's from (the day before) yesterday. The craft of building from scratch or distorting a truth to achieve some goals (be it political, economic, social or other) is not a practice of modern society. For example, according to Sun Tzu, author of *The Art of War* (ed. 2017), all armed conflicts are based on deception: when you want to attack, you pretend to be powerless; when you want to use force, you pretend to be inert; when you are close to your enemy, you give him the impression that you are far away, and when you are really far away, you have to make him believe otherwise.

The printing press (around 1450) contributed to the spread of fake news phenomenon, which gained momentum due to the lack of verification and filtering tools. Existing sources at that time, from official ones to eyewitnesses, were not based on *objectivity* or *(journalistic) ethics*, historians being the only *fact-checkers* of those times (Soll, 2016).

In recent history, the phenomenon of fake news has been evident since 2016, with the UK's decision to withdraw from the European Union – *Brexit* – and the presidential election in the United States.

UK has decided to leave the European Union and held a referendum (in June) in which over 30 million people took part. The debates and activities (in real-life/ on social media), which were carried

out by the two camps – *Leave* and *Remain* – contained, among other things, incorrect information or fake news and fostered *ideological polarization* (Spohr, 2017). The result of a study, which analyzed (on Facebook) news consumption and the phenomenon of *selective exposure*, revealed the existence of two well-isolated *echo chambers* (Bârgăoanu, 2018), formed after online users chose to focus on certain topics and, by default, ignore others (Del Vicario et al., 2017). On other social platforms, such as Instagram and Twitter, supporters of the *Leave* camp were not only twice as many, but also five times more active than those of the opposing camp (Polonski, 2016). After polling day, Arron Banks (the main *Leave* camp backer) said that while *Remain* focused on the facts, what really mattered was the emotional connection with people – for example, while *Remain* bet on the subject "economy", *Leave* chose "migration" (Booth, Travis & Gentleman, 2016).

Every time he (Vladimir Putin) *sees me, he says, "I didn't do that." And I believe — I really believe that when he tells me that, he means it* (Donald Trump statement; Borger & Holmes, 2017). The end of 2016 culminated with the election of a new president in the US: Donald Trump. An analysis conducted shortly after Election Day showed that fake news related to the event, which had been shared on social media for three months prior to 08.11.2016, had higher engagement than the most prominent news published by important media sources (Silverman, 2016).

In the first part of 2018, Cambridge Analytica was involved in a resounding media scandal. The entity in question – a company specialized in creating strategies and personalized messages that are tailored to each voter's psychometric profile – along with the Republican Party's online campaign team and marketing agency Giles-Parscale, were involved in the online visibility of candidate Donald Trump during the 2016 US presidential election. Cambridge Analytica's access to the Republican Party's database has made it one of the most powerful election machines in the world: the company's method of constructing voter profiles has sparked discontent even among Republican campaign consultants, who have complained of professional ethics violations (Taggart, 2017).

A leap to Southeastern Europe: the 2019 Romanian presidential election. In the run-up to the election, and in the interval between the two rounds of voting, Facebook "hosted" a series of fake news stories, created and directed at both citizens in the country and those forming the Romanian diaspora. In the context, articles pointed out that a) the Minister of Finance wanted to tax both money transfers from abroad and the salaries of Romanians abroad; b) one of the candidates was allegedly aided in his communication with journalists by a headset through which he received answers from a third person during a press conference; c) members of a political alliance in Romania were allegedly urging the population to boycott the country's presidential elections.

The emergence and global spread of the new coronavirus (SARS-CoV-2) has fueled the practice of disseminating information designed to create confusion or insecurity among the population, a practice labeled by the World Health Organization (WHO) itself, via its official website, an *infodemic* (2020).

If at first, some media sources (domestic or international) with personal agenda reported that the virus a) was created in a laboratory to serve political interests, b) was a pretext for the establishment of a new world order, c) was aimed to reduce the number of elderly people that put pressure on the economy (by paying pensions), d) was linked to 5G networks, etc., now, as we go through the immunization period, the fake news rhetoric has quickly folded into the new reality: vaccines are part of a plan "to microchip" the population.

Fake news: conceptual delimitations

Romanian language does not have a specific term that conveys exactly what fake news is. In this case, some clarifications are necessary: a) *fake news ≠ false news* because false news does not cover, at the semantic level, "all the differences and nuances" (Voicu, 2018, p. 16); b) *fake ≠ false* because "we are not dealing with something false, which can be set in opposition (at least, not always) to something true"; the practice of "false-true" pair exposure can be misleading, as the phenomenon in question covers "a much wider spectrum, with forms of manifestation that oscillate between the extreme "completely false/

untrue" to... it is hard to say which is the other extreme" (Bârgăoanu, 2018, p. 137-138).

Moreover, policy makers and researchers or experts in the field either hesitate to use the term "fake news" or reject it altogether. Political or scientific articles (such as the *Joint Declaration on Freedom of Expression and Fake News, Disinformation, and Propaganda* signed in March 2017 or *A multi-dimensional approach to disinformation Report of the independent High-level Group on fake news and online disinformation* signed in March 2018) have used the term "disinformation" to refer to this type of content.

For example, the deliberate avoidance of the use of "fake news" term by the High-Level Expert Group (HLEG – European Commission), has been explained by two reasons: (a) the term does not accommodate the complexity of the phenomenon of disinformation (which involves, not just partially or completely false content, but information that is fabricated in a mixture of facts and practices that is far from the classic meaning of news); (b) the term is not only inadequate, but also misleading (given that both some politicians and their supporters use to negate issues they do not agree with or to undermine the media).

Here, it is necessary to make a distinction between what false and fake news represent: while false news is an inaccurate, apparently harmless information, generated (mostly) with the intention of increasing the audience/web traffic (through the number of clicks), fake news represents the product of a strategy (managed by an individual/ group of individuals, a company, a state etc.), which aims to manipulate the population, in medium and long term, in order to achieve a desired goal.

Other definitions that explain the term "fake news": a) "widely disseminated news articles that are intentionally and verifiably false and likely to mislead readers" (Allcott & Gentzkow, 2017, p. 213); b) "plausible" news that "incorporates and melds half, if not quarters of truth and fake" (Bârgăoanu, 2018, p. 135); c) "fabricated", "distorted or truncated" information, disseminated in traditional and online media "by a state or an organization", and benefiting from "a budget, a strategy and an ideology, with the aim of deepening existing social tensions and creating confusion" (Voicu, 2018, p. 12); c) information that can be

divided into either deliberately invented news or news that, although only meant to fool/ entertain the public, is taken seriously (Rubin, Chen & Conroy, 2015).

A fake news often contains: a) sensational or shocking headlines (consisting of negative words, often written in capital letters and accompanied by exclamation marks), referring to a person known to the public or to an important event with (often negative) effects on citizens and which, by their construction, encourage the reader to access the news, even though its information content does not correspond to the headline; b) invented information or interpretations of real information, taking it out of context in order to mislead and to meet the intended purpose. News items are presented bombastically and summarily written, do not bear an author's signature (if there is one, it belongs to editorial office or is a pen name), do not present additional supporting data/information, do not provide other sources through which the veracity of the published content can be verified (and when they exist, the sources are obscure). Here it is also important to underline that, given the continuous transformations that the phenomenon undergoes, no standard recipe can be developed to be applied as a template in the work of detecting fake news.

Fake news: reasons & creators

The reasons are diverse: from financial gain to pure passion or simple fun. *Financial gain* – news that goes viral online (through significant number of clicks) also brings with it significant advertising revenue. The existence of an *ideology*: some fake news creators construct their news in such a way as to favor their preferred candidates (Dewey, 2016; Sydell, 2016). By appealing to issues that fuel racial, ethnic or religious tensions, they aim *to deepen rifts in society* (Voicu, 2018). *The intent to cause harm* is manifested by tarnishing the image of a person/ entity, etc. Mostly, fake news is used as a weapon of denigration; there are extremely rare instances where it has been used to promote something or someone (Hunt, 2016; Wardle, 2017). Other reasons: *passion* and *entertainment*. Some individuals are so drawn to an idea, person or entity that it can affect their judgement and turn

them into creators and/ or newsmongers of fake news. Such individuals can be "blinded" by their beliefs and come to perceive fake content as accurate and useful for further dissemination (Wardle, 2017). In other cases, by disseminating fake news, the intent to harm is not a priority: some individuals just want to have fun.

The categories of those who "help" create and disseminate fake news are diverse: from journalists to *trolls* and *bots*. When it comes to filtering information, some *journalists* turn off from the role of gatekeeper and end up voluntarily creating and disseminating fake news according to some reasons they have and consider right: increasing readership, drawing advertisers, following a parallel agenda that differs from the official one etc. At the same time, *public figures* – other than journalists – use fake news either to reinforce their already created image (ethos) or to denigrate other people or entities known to the public. On the other hand, *terrorist organizations* use the Internet in general and social media in particular to promote, (also) through fake news, their "successes" and "infinite" power, the "high" standard of living enjoyed by their members or the "top" facilities of access to education and health (Al-khteeb & Agarwal, 2015).

The term *useful idiot*, which is common in political and journalistic jargon, refers to those people who propagate fake news without actually understanding what is at stake. These people are useful in such activities, as they are easily manipulated by those who manage their activities. Also, there are people selected and paid – *trolls* – a) to generate and disseminate fake news, in online, regarding people or events known to the public, b) to promote a particular agenda, c) to influence masses of people. "Hate speech, ridiculing serious news stories, diverting attention to topics that generate a strong emotional response" are some of the purposes of trolls' posts. "They take advantage of the Internet subculture to set the public agenda" (Voicu, 2018, p. 347). In contrast with bots, trolls are much more difficult to identify given that they express a behavior similar to that of classic social media users.

Bots – automated software agents "which interact with servers, run simple and repetitive tasks", and that are built "on the principle of neural networks and endowed with some degree of artificial

intelligence" (Voicu, 2018, p. 11). They are "actors with a political agenda" who "mimic behavior in social media" with the aim of "manipulating and disrupting communication" and "delivering propaganda and fake news" (Voicu, 2018, p. 348). In the fake industry, they are responsible for controlling the online activity carried out by specifically created fake accounts, which are tasked with disseminating misleading content (Boshmaf et al., 2011). A bot automatically produces content and interacts with individuals on social media trying to alter their information consumption – in the case of fake news and misinformation; these bots are programmed to mislead the reader, manipulate his decisions, and misinform him.

Fake news: the environment

Fake news is created and posted on *social networks* and *websites*, some of which are specifically created to promote such content. Some of these sites usually do not have a long lifespan; their administrators do not seek to invest in their image, reputation or quality, but aim to maximize their revenues and achieve other goals in the shortest possible time. Many of these sites bear names similar to those of known news agencies, such as nationalreport.net, usatoday.com.co, washingtonpost.com.co (Sydell, 2016) and are interlinked with social networks, search engines and mainstream media, which give them high visibility.

On the other hand, the dynamic nature of social networks offers any individual, regardless his training or intention, a dual role – creator and consumer of information. The importance of social networks for the fake news industry cannot be overlooked. Through the advantages of these platforms – a) the ability to gather, at the same time, a significant number of people; b) the possibility for any individual to become "a voice" to be listened and followed; c) the speed with which a piece of information is posted and then distributed; d) the possibility to access them from anywhere in the world, at any time – the amount of fake content can be replicated considerably compared to that of an authentic one (Potthaus et al., 2017). While, initially, the role of social networks was to unite individuals and groups in order to interact and share

common values, today, free access and lack of terms of use have created the environment for the development of the fake news phenomenon. The majority of the generation living online is not sufficiently prepared and not sufficiently interested in understanding what news is and how it differs from other types of information; this generation lacks the cultural DNA that their parent's generation possesses (Richardson, 2017).

The spread of disinformation through social media is directly related to phenomena such as *ideological polarization* or *segregation of online users* (Del Vicario et al., 2017). Discussions around polarization were amplified in the context of Brexit and the US presidential election (2016), both events highlighting that the two nations were highly divided politically and social groups were ideologically opposed to each other (Geiger, 2016; Oliphant & Smith, 2016). The expression of hostile feelings by American or European citizens towards individuals with whom they were on the other side of the political spectrum was also fueled by people choosing to only obtain information from certain sources that were in line with their beliefs and values. To highlight the existence of the phenomenon of polarization on social networks, Eli Pariser (2011) popularized the term "filter bubbles". This term highlights the fact that algorithms, which are designed to personalize an individual's online experience, actually place them in a "bubble" where they are surrounded only by that information that corresponds to their consumption behavior. The purpose of these algorithms is to connect individuals to that information they want to know and consequently create a personalized stream of content that offers no other alternatives instead (Rader & Grey, 2015).

Another hypothesis that tries to specify the source of ideological polarization online focuses on what represents the cognitive biases – "confirmation bias" (Voicu, 2018, p. 11; Bârgăoanu, 2018, p. 35) – of individuals. This phenomenon translates into the fact that individuals tend to consume only information that is in line with their opinions and beliefs and avoid all other information that is contrary to their expectations. The human brain engages in a process of ensuring consistency by defending its beliefs, and this happens

involuntarily; individuals are too unaware of the existence of this process in their mind.

At the same time, individuals are being flooded with all kinds of information, invading their space through social media, and they are no longer in a position to search for their own sources of information. This phenomenon has a name – *news-finds-me perception* – and is defined as "the situation in which individuals remain indirectly informed about public issues, despite the fact that they do not actively follow the news" (Gil de Zúñiga, Weeks & Ardèvol-Abreu, 2017, p. 3).

Fake news: who and how (can) reduce the phenomenon

The lack or the low number of filters – those *gatekeepers* of the traditional media– that filter the content from social media, allows a continuous development of fake content. Quality control of online content is extremely important, and this requires actors and a set of tools to facilitate the process of verifying the information that was disseminated.

Stopping a phenomenon such as fake news requires the adoption of a set of best practices, which "fall into three major categories: transparency, trust building, and media education" (HLEG, 2018, p. 14).

As regards transparency, the following are needed: a) initiatives to identify and verify sources of disinformation; b) taking measures to limit the spread of biased content; c) publicly exposing and dismantling detected cases of fake news; d) promoting quality journalism. For their part, social networks need a) to work to identify and close fake accounts that generate fake content; b) to modify their algorithms in order to increase the visibility of credible, quality content; c) work with fact-checking organizations, which carry out online activities to verify the veracity and quality of online information.

Independent news sources and fact-checking organizations have also started their own activities to verify the quality and veracity of information circulating online, with the goals of informing the public, improving political rhetoric and influencing other journalists (Vargo, Guo & Amazeen, 2017). At the same time, in the whole process of

limiting the phenomenon of fake news, it is also necessary to strengthen societal resilience, media trusts and states (HLEG, 2018, p. 19).

Conclusions

New media are defined by a series of positive characteristics (such as interactivity, variety, free access etc.), but they also hide a series of dangers (ideological polarization, filter bubbles etc.). Throughout this environment, disinformation has a continuous transformation – from fake news (made by a human operator) to deepfake (made with technology) – and this is increasingly difficult for fact-checkers to detect. Viewed separately, as one piece of a mechanism, the fake news phenomenon remains a challenge for both those who create and those who consume quality information. The impossibility of filtering content online gives some individuals the "chance" to gain notoriety and even compete with important media sources.

Given the manner of response to, for example, election campaigns, social movements or the COVID-19 pandemic, this phenomenon of fake news will always have an alternative truth to illustrate.

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#PRINGLE – OPEN SOURCE INTELLIGENCE IN THE ERA OF DIGITALIZATION: CONNECTING THE DOTS BETWEEN INTELLIGENCE GATHERING AND SOCIAL MEDIA

THE IMPACT OF THE PANDEMIC ON THE PRESENCE IN THE ONLINE ENVIRONMENT OF THE INSTITUTIONS WITH A ROLE IN ENSURING NATIONAL SECURITY

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Abstract:

The coronavirus pandemic surprised the entire planet and caused changes in everyone's lifestyle. In many areas it took inventiveness to keep the situation afloat. The online environment became the main means of communication during the period when social distance became compulsory. In addition to communication, in many areas, the online environment has become the only possibility of carrying out activities. Areas such as education, culture and the economy have minimized physical interaction and adapted the activities to the online environment.

National security institutions have also adapted to the use of the online environment to keep the population informed in the pandemic context. Social networks are the most widely used information tools of this period. If, until the beginning of the state of emergency, social networks were used by these institutions to some extent, the switch to online has led to an increased public presence in the virtual environment of institutions with a role in ensuring national security.

Through this study, using content analysis, we will show whether and how much the pandemic has changed the work of national security institutions on social networks. The pandemic brought a wave of information to social media, and those who aimed to maintain a balance realized that they had to be present online. Perhaps this would have been necessary, regardless of the pandemic. Digital natives would have prompted a change in the way activities were carried out. We can say that the pandemic has just hastened things.

Keywords: *pandemic, national security, social media, online, information.*

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Introduction

Social networks are part of our lives. They are used in various activities, both in private and professional life. The pandemic caused by the coronavirus has led to an increase in the number of activities carried out with the help of social networks. Social distancing has forced people to find alternatives to stay connected without being physically next to each other. This has led to an increased use of social networks.

Although Romania was not technologically ready for a rapid transition to the online environment, things have evolved and there are now more and more activities that can be carried out successfully online. Given the fact that this pandemic involved a change in the way of life worldwide, all institutions, state or private, have adapted so that they are close to the population, and the most widely used tool for achieving this objective has been social networks.

The change was also accepted by the institutions that have a role in ensuring national security. The uncertainty caused by the pandemic has led to the adaptation of the work of these institutions to inform the public correctly and prevent the emergence of other threats to national security.

Through this study we aim to establish how the coronavirus pandemic has altered the online activity of national security institutions. We hypothesize that *the pandemic has led to a higher presence of these institutions online.* To achieve the objective, we will analyse the official Facebook pages of state institutions responsible for ensuring national security in Romania during 2020 and carry out a quantitative analysis of the number of posts each month.

Certainly, the coronavirus pandemic has permanently changed everyone's lifestyle and the end of it will most likely not involve a return to the life before the pandemic because some changes will become the normality of our lives. Ideally, we should be able to identify those aspects that have had a positive impact on our lifestyle and continue with them, but also to give up those that have had a negative impact.

Study methodology

To achieve the proposed objective, we will use content analysis as a research method. This method "represents a qualitative-quantitative method of studying communication, but not only of its manifest content, but also of the latent one." (Chelcea, 2001). We will use content analysis to determine the evolution of the presence of institutions providing national security on social networks in 2020. The objective of the study is to identify the impact of the coronavirus pandemic in the online activity carried out by these institutions.

We will start by identifying them and then we will continue with the presentation of the defining aspects of the institutions. To achieve the proposed objective, it is necessary to establish the hierarchy of the institutions, depending on their popularity in the online environment. We will also pay attention to the number of employees in each institution because this number can also influence their popularity on social networks.

The final step in this research will be to carry out a quantitative analysis of the online activity undertaken by each institution. To achieve this, we will initially determine which social network is most widely used among these institutions. We will then quantify the number of posts from 2020 on the most popular social network.

Social networks in national security institutions

According to Burgess and al., social networks can be defined as "those digital platforms, services and apps built around the convergence of content sharing, public communication and interpersonal connection" (Burgess, Marwick și Poell 2018). This definition underlines the main facilities offered by social networks in carrying out activities: the possibility of sharing information in a short time to many people; the ability to communicate very easily and quickly and establish a connection between people.

Manning believes that the definition of social networks is based on two characteristics common to all social networks: participation and interaction. Participation refers to the fact that, to benefit from what social networks offer, it is necessary to create a profile in order to leave

anonymity and to give up the mere observation of information. Interaction involves connecting users, whether they are close people, relatives, friends, or people who know each other through social networks. Therefore, social networks are the way people communicate with each other, transmit information and build relationships (Manning, 2014).

The most used social networks in October 2020, according to the information found on Statista, are: Facebook, Youtube, Whatsapp, Facebook Messenger, WeChat and Instagram (Tankovska, 2020). The hierarchy was made according to the number of active users. In that situation there were other social networks, among which we mention: TikTok, Snapchat, QQ, Pinterest, and Telegram.

The largest social network was and continues to be Facebook. It was launched in 2004. Since then, it has been used by billions of people around the world. In early 2009, it was declared the most widely used social network in the world. The next moment to demonstrate Facebook's popularity was in mid-2010, when Google announced that Facebook social network was the most visited platform in the world in May 2010 (Edosomwan, Prakasan, Kouame, Watson, & Seymour, 2011).

Given the fact that Facebook is the most widely used social network, we will conduct our research on the Facebook pages of the identified institutions. Facebook is used both at the individual and the organizational level. As defined, it is a social network used for communication, people's connection, and information sharing. Facebook is also used for promotion, sales, recruitment, etc. More and more activities are being carried out with the help of Facebook. In 2016 a research was carried out which established the activities that can be performed using social networks: "broadcast, dialogue, collaboration, knowledge management and sociability" (Schlagwein & Hu, 2016). This research covers approximately all activities taking place online, via social networks.

With the pandemic caused by the coronavirus, the online became indispensable in many other areas. If, until the start of the pandemic, social networks had a decisive role in activities such as promotion, recruitment and communication, from March 2020 onwards, social networks became an integral part of areas such as education, artistic activities, banking activities and almost all areas that

enable remote activities to take place. Even activities that, before the pandemic, seemed impossible to take place online, were successfully adapted. These activities include fitness, concerts, and visiting museums. Activities adapted to the pandemic context have been carried out in each area. People have been looking for solutions to make them resist the restrictions imposed by the pandemic.

The category of institutions that have adopted the Facebook method for promotion includes state institutions that provide national security. According to Law No. 51/1991 on the national security of Romania, Article 6, paragraph: 1, "State bodies responsible for national security are: Romanian Intelligence Service (RIS), Foreign Intelligence Service (FIS), Protection and Guard Service (PGS), as well as the Ministry of National Defence (MND), Ministry of Internal Affairs (MIA) and Ministry of Justice (MJ), through specialized internal structures" (Law No. 51/1991 , 1991). All these institutions have official Facebook accounts. The role of these accounts is to promote the institution and also help the institution to be closer to the citizens. Some organizations pay more attention to social networks, while others do not consider them necessary. The use of these social networks in the field of security is determined by the need of the institutions to be close to citizens to carry out their tasks.

Results

To be able to rank institutions with national security responsibilities, depending on the work they do on the Facebook page, we will consider the number of employees in each institution. We believe that online popularity is influenced by the number of employees, assuming that they are interested in following the Facebook profile of their institution.

According to the list published by the Ministry of Public Finance in September 2020, **MIA** has 125,973 employees, **MND** has 75,292 employees, **MJ** has 16,625 employees and **PGS** has 1,410 employees. Therefore, depending on the number of employees, the hierarchy we have established, based on official data, is found in Figure 1. We have not been able to introduce RIS and FIS into this hierarchy because, by

the nature of their work, the number of employees cannot be disclosed. Since the number of employees is an important aspect in establishing the online popularity of certain institutions, we will take this into account, even if we have not identified the data for all the institutions concerned.

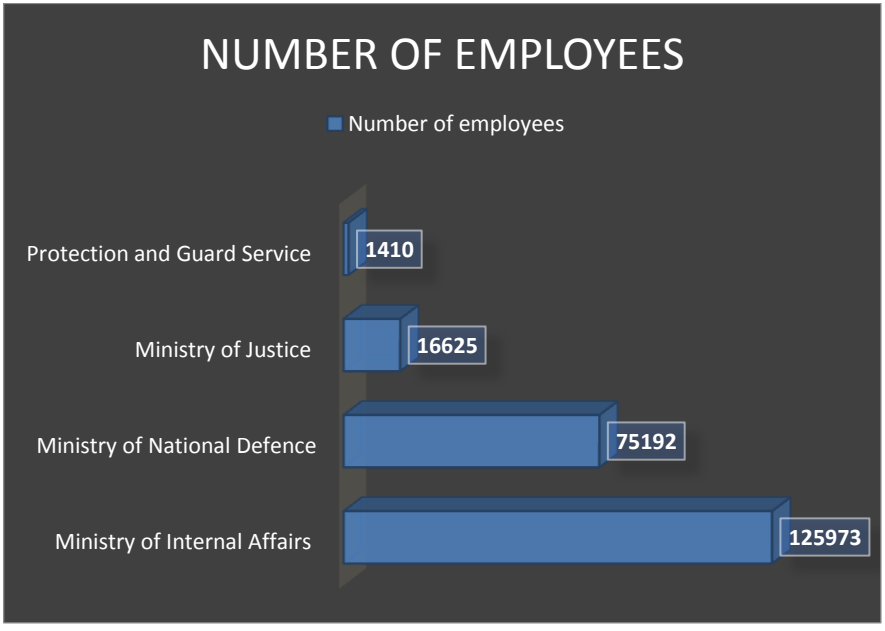

Figure 1: Number of employees

All institutions with national security responsibilities from Romania have official pages on the Facebook platform, pages that are easily identified by the name of the institution. This social network offers its users the opportunity to choose certain aspects related to privacy. Users can decide whether the profile created will be public or private. The public profile can be viewed by anyone, whether they are friends on Facebook or not. Instead, the private profile can only be viewed by users who are in the friends list.

The Facebook pages of these institutions are public, so we had access to the shared posts. The next step was to establish a hierarchy of

institutions, depending on the number of followers and the number of likes on Facebook pages. These two indicators are designed to determine the online popularity of a profile. The result is illustrated in Figure 2. MIA is the institution with the most followers on the Facebook page and at the opposite pole is FIS, with the fewest followers.

Followers of a social media profile show the impact that profile has on the online environment and the likes suggest that the impact is positive for the profile followers. That is why we considered it necessary to identify the number of followers and the number of likes that the official Facebook pages of the institutions we are looking at have. From Figure 2, we can see that the number of likes is directly proportional to the number of followers of each page. Those who follow a particular profile, often, do so because they are interested and because they appreciate that profile. Therefore, the two numbers are directly proportional.

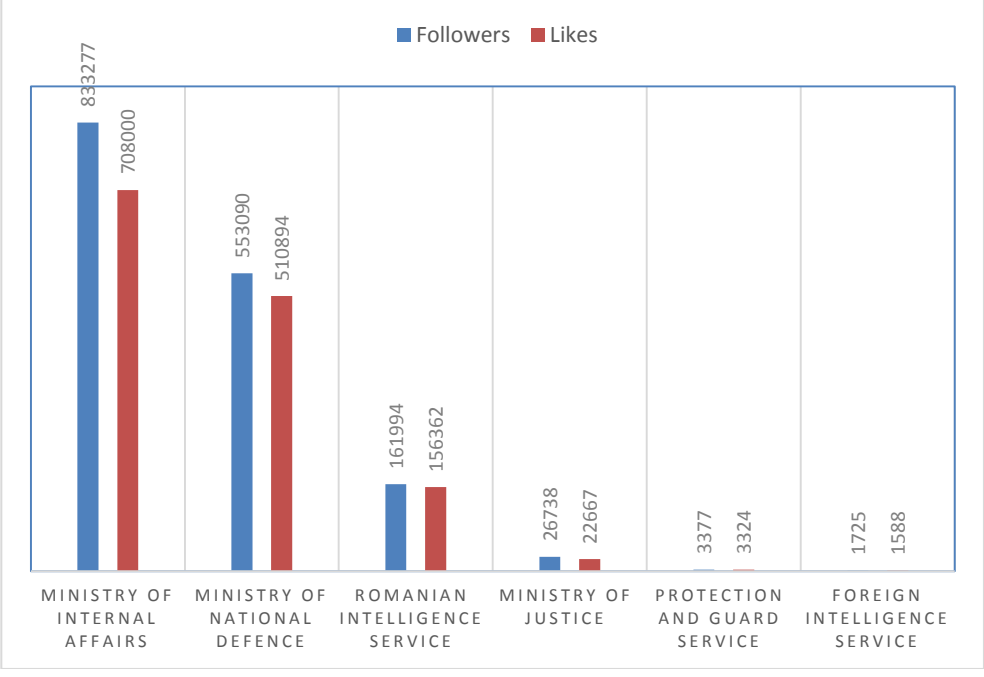

Figure 2: Online popularity of institutions that play a role in ensuring national security

Looking at the two figures, we can observe that the number of employees is directly proportional to the number of posts and the number of likes of Facebook pages. This is somewhat normal because most employees follow the Facebook page of the institution they work for. Although the intelligence services, for security reasons, do not provide official data on the number of employees, we can support the above claim based on data obtained from the other institutions.

The period we will have in our analysis will be the full year 2020. To observe the evolution of the institutions' activity on Facebook, we will set the 2020 limit in four time periods during which we will analyse the time-interval posts: January – February (pre-pandemic period); March – May (state of emergency); June – September (relaxation of restrictions) and October – December (introduction of new restrictions). We believe that these are the periods of 2020 relevant to our research because they are the periods during which there have been major changes related to the evolution of the pandemic. We believe that these are the 2020 intervals relevant to our research because they are marked by major changes that have occurred because of the evolution of the pandemic.

MIA

MIA is the institution within the national security system with the highest number of employees. Following the research carried out on the Facebook page of this institution we have identified the data presented in Figure 2. In the pre-pandemic period, activity on the Facebook page was the lowest. During the state of emergency, the number of posts increased considerably, the first month being the month with the most posts. Exiting the state of emergency and relaxing restrictions led to a decrease in activity on the MIA's Facebook page. With September, the month in which new restrictions were introduced, the activity on Facebook was intensified. Since then, the number of posts has been steadily increasing. This is the period during which MIA paid the most attention to the official Facebook page.

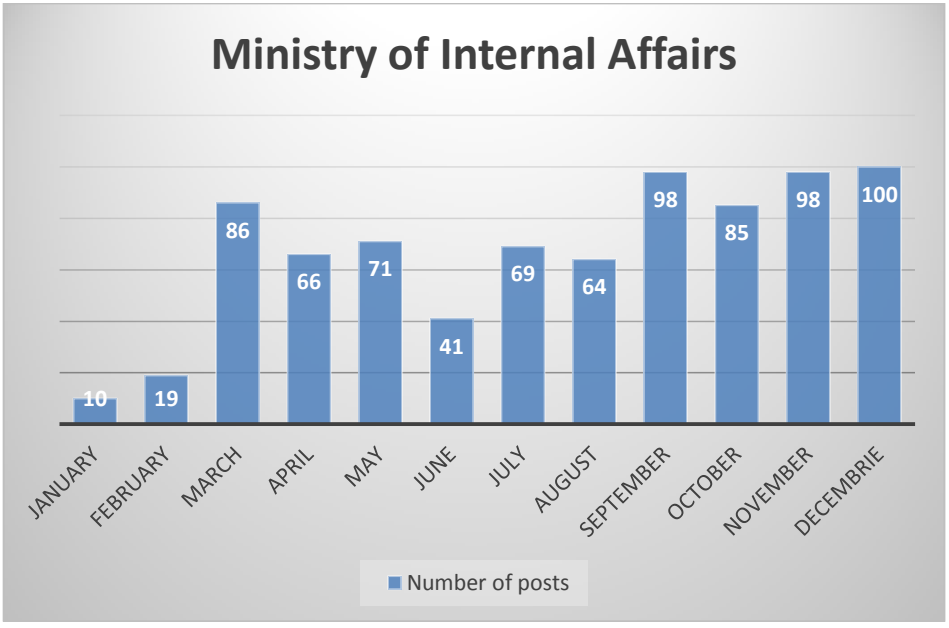

Figure 3: Presence of MIA on Facebook in 2020

MND

The situation of the posts on the official MND page in 2020 is illustrated in Figure 4. In the pre-pandemic period, there was the lowest activity on the Facebook page, followed by the period of restrictions imposed by the pandemic. During the state of emergency, the number of posts shared by MND increased. The period in which most posts were distributed is the period October – December. This was the period in which the number of cases of COVID-19 infections increased, leading to the imposition of new restrictions at the national level. Since September, MND has increased the number of posts distributed on Facebook.

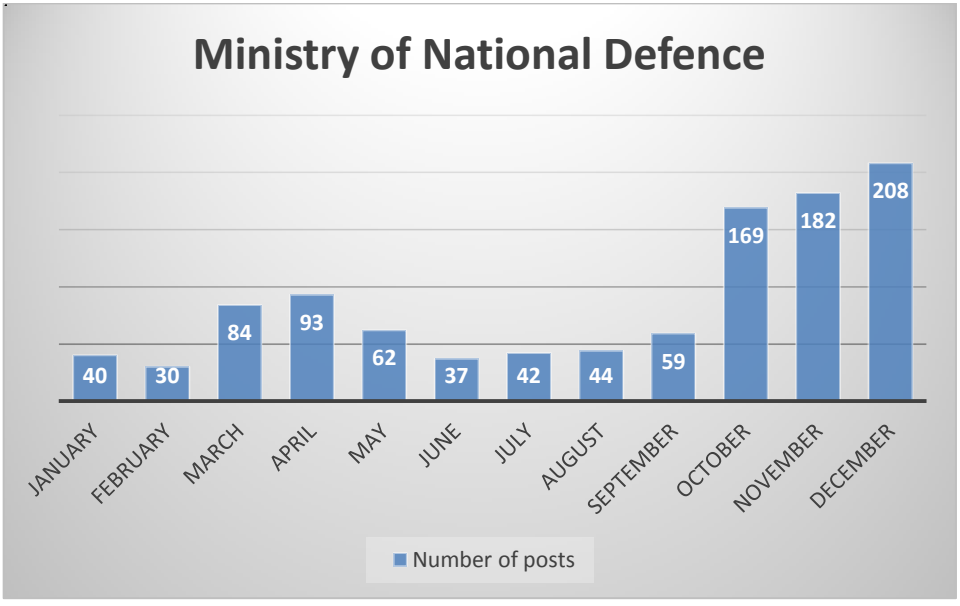

Figure 4: MND presence on Facebook in 2020

RIS

RIS does not have a large activity on the official Facebook page. The maximum number of posts in a month is 5 and the minimum number 1. So, there is no month without a shared post, but, anyway, not at the level that MAI and MND are at. In Figure 5, it can be seen that the most intense activity on RIS's Facebook page took place during the period when there were restrictions imposed by the pandemic: March-May and October-December, and the lowest activity took place in the pre-pandemic period and between June and September, when certain restrictions were lifted.

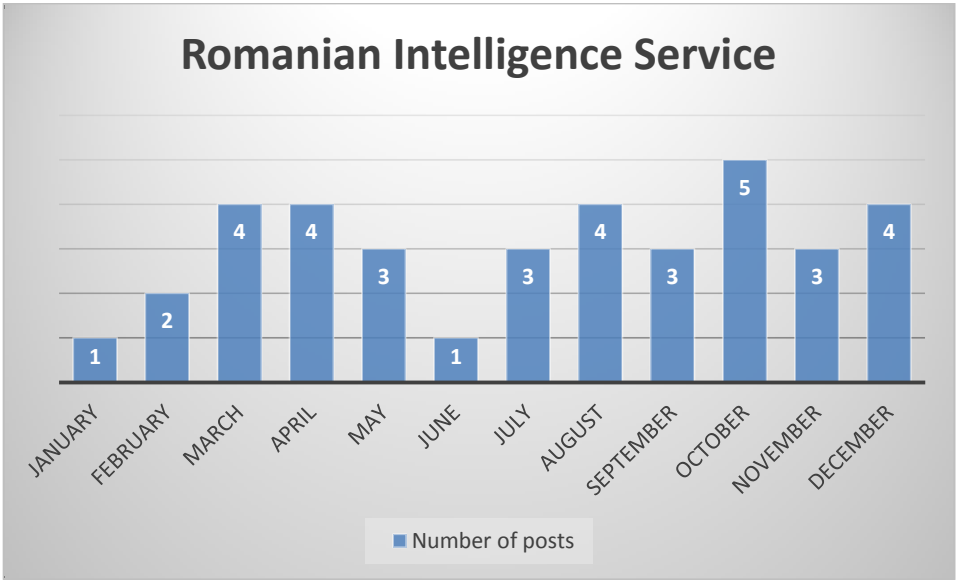

Figure 5: RIS presence on Facebook in 2020

Ministry of Justice

The analysis of the work carried out by MJ on the Facebook page is illustrated in Figure 6. This institution ranks after MND and MAI in terms of the intensity of activity on Facebook. In the pre-pandemic period, MJ's online activity was incredibly low. The establishment of the state of emergency led to an increase in the work carried out by this institution on the official Facebook page. Then, during the summer, when certain restrictions were lifted, a slight decrease was seen in the activity on Facebook of this institution. The last period of the year led to an increase in posts shared by MJ. However, the differences between the 4 periods related to posts shared by MJ on Facebook are not so significant. The biggest difference is between the pre-pandemic period and all other periods.

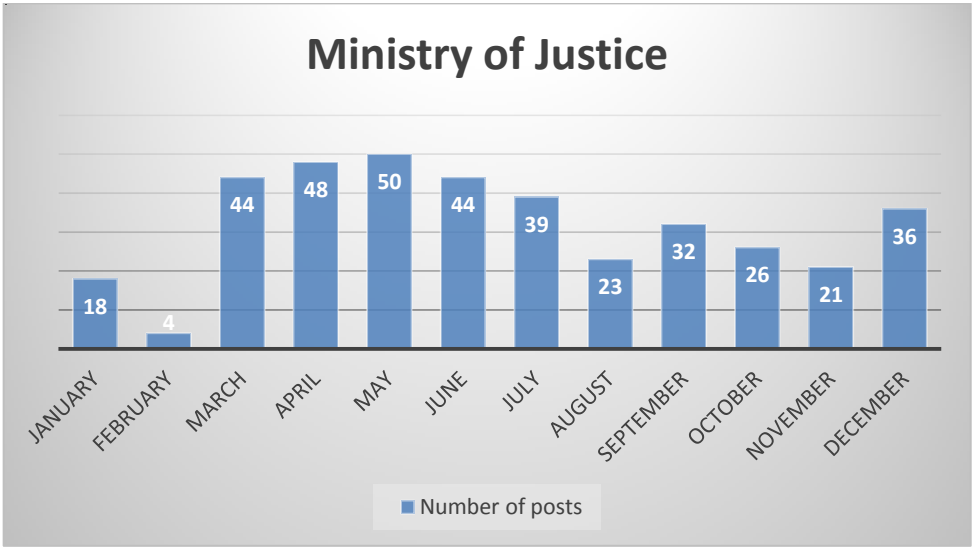

Figure 6: MJ's presence on Facebook in 2020

Although they have official Facebook pages, FIS and PGS did not use this method of communication in 2020. The last post shared by FIS was in 2017, and the last post shared by PGS was in 2014. For these two institutions, the coronavirus pandemic was not a trigger regardless the activity on Facebook page.

An important aspect that we can see from the work carried out on Facebook by MIA and MND is that although MIA has more employees, more followers on the Facebook page and more likes on this page, MND distributes several posts on Facebook, ranking MIA 2nd in the top presence on Facebook. The next institution, after MIA, is MJ and in 4th place is RIS. Regarding MJ and RIS, we do not have data to confirm that the order we have established is real.

Conclusions

Looking at the activity on the Facebook page of all institutions that have a role in ensuring national security, we can see that they have the same trajectory. The event that prompted the change in Facebook activity in 2020 was the pandemic caused by the coronavirus. The

restrictions have led to activities moving online and we can say this at a time when the lifting of certain restrictions has led to a decrease in the number of Facebook posts. The introduction of new restrictions has also led to an increase in online activity. So, we validated the hypothesis of this study.

Our study has tracked the evolution of the Facebook activity of institutions with a role in ensuring national security from a quantitative point of view. We consider this to be a limitation of the research because a qualitative analysis would also be useful. We have shown that several posts were distributed in the months when more restrictions were imposed but analysing the content of these posts would be a research direction to identify how the coronavirus pandemic changed the activity on the Facebook pages of these institutions.

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#INTELLHISTORY – INTELLIGENCE AND SECURITY COOPERATION IN HISTORY: THEORY AND PRACTICE

TIBERIUS CLAUDIUS MAXIMUS, THE CAPTOR OF THE DACIAN KING DECEBALUS – THE MOST DECORATED ROMAN INTELLIGENCE OFFICER

Cristian GĂZDAC*

Abstract:

The use of an intelligence asset – either civilian or military – in order to ensure the completion of a security task that may have a major political/military/historical consequences it has been the prerogative of modern and contemporary history. The existence and an easy access to written media has ensured the myth of intelligence world and operatives.

What if a fluke occurrence were allow us to bring forward long time forgotten similar cases which due to the lack of media were buried in the history oblivion?

Based on an extraordinary funerary stone of almost 2,000 year old, the present paper is analysing the career of an intelligence officer in the Roman army, who's intuition/talent led to the capture of one of the most wanted leaders of the barbarian world – the Dac

Keywords: *intelligence officer, Dacian war, Tiberius Claudius Maximus, military career, awards*

Motto: *"Quodsi ea mihi maxime inpenderet tamen hoc animo fui semper, ut invidiam virtute partam gloriam, non invidiam putarem"*
[I have always been of the opinion that unpopularity earned by doing what is right is not unpopularity at all, but glory]
(Marcus Tullius Cicero, In Catilinam I 1.12/1.29 (63 BC)

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Introduction

Following an avalanche of literature and cinematography products over the last decades, the profile of the intelligence officer has become a popular figure among the open public. From a real Mata Hari to the fictional James Bond, Jason Bourne, Jack Ryan or Ethan Hunt. Through childhood, puberty and adulthood, we have been fascinated by these characters with an aura of almost super-heroes. But, unlike the super-heroes, who took advantage of their magical powers, our above-mentioned heroes used what they knew more effectively, and which, at the end, define the name of their field of training – **Intelligence!**

We are aware of the names mentioned above either because of highly talented authors or due to the vagaries of history. Jan Flemming was himself a naval intelligence officer, and use his knowledge in this field to build a memorable, charismatic and fierce James Bond character. In the case of the famous spy Mata Hari - Margaretha Geertruida MacLeod (née Zelle) – the combination of her nimb of exotism on one side and the nonchalance in gathering intelligence on the other side place her on the wall of famous names in intelligence.

Were all these names the only ones that we had to take to like the field of intelligence studies? Was history so boring as to fill humanity only with the

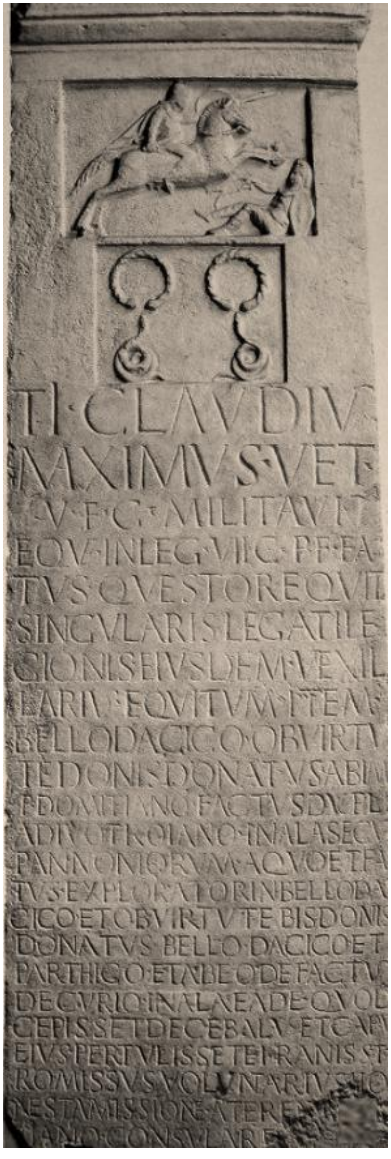

Figure 1. The tombstone of Tiberius Claudius Maximus (https://www.pinterest.com/pin/703898616732687069/)

glorious big events and full of data and names of various historical characters?

Certainly, by its specificity, one may expect a discrete shadowy work(s) of those who have paved, on so many occasions, the success of those great leaders.

However, more and more access to information by declassifying secrete archives together with reanalysing old sources and evidence may reveal the existence of other individuals that may have shaped the world history.

Aim of paper

Is to present such a character based on a peculiar source – his own epitaph written by himself for his tombstone while still alive.

At the first sight, it may sound weird, but considering that we are talking here about a person who lived almost 2,000 years ago in the Roman Empire, we should not forget that the funerary stones were, in those times, true curriculum vitae for the VIPs (a *cursus honorum).*

The character

His name was Tiberius Claudius Maximus and his acts in life acknowledge that he was a person who definitely knew how to fulfil his tasks.

In 1965, a large tombstone with a Latin inscription was accidentally discovered in the fields of Grammeni, 'a village to the north-west of the ancient city of Philippi in [Roman] Macedonia' (nowadays, Greece) (Speidel 1970, p. 142).

The text of this inscription can be completed in Latin as:

'Ti(berius) Claudius / Maximus, vet(eranus) / [s(e)] v(ivo) f(aciendum) c(uravit). Militavit / eque(s) in leg(ione) VII C(laudia) p(ia) f(ideli), fac/tus qu(a)estor equit(um),/ singularis legati le/gionis eiusdem, vexil/larius equitum, item / bello Dacico ob virtu/te(m) donis donatus ab im/p(eratore) Domitiano. Factus dupli(carius) / a divo Troiano in ala secu(n)d(a) / Pannoniorum, a quo et fa(c)/tus explorator in bello Da/cico et ob virtute(m) bis donis / donatus bello Dacico et / Parthico, et ab eode(m) factus / decurio ala eade(m), quod / cepisset Decebalu(m) et caput/ eius pertulisset ei Ranissto/ro. Missus voluntarius ho/nesta missione a Terent[io

Scau]/riano, consulare [exerci]/tus provinciae nov[ae ?Mes/opotamiae ....].'(Speidel 1970, p. 142)

Translation:

'Tiberius Claudius Maximus, veteran, undertook the construction of this monument while he was still alive. He served as a cavalryman in Legion VII Claudia Loyal and Faithful, was appointed treasurer of the cavalry, guard of the commander of the same legion, standard-bearer of the cavalry, and in the Dacian war was awarded military decorations for bravery by Emperor Domitian. He was promoted to 'double pay' soldier (*duplicarius*) in the second ala of Pannonians by the divine Trajan, by whom he was also appointed to the position of scout in the Dacian war, and twice awarded military decorations for bravery in the Dacian and Parthian wars, and was promoted decurion in the same cavalry ala by the same emperor because he had captured Decebalus and brought his head back to him at Ranisstorum. After voluntarily serving beyond his time, he was honourably discharged by Terentius Scaurianus, commander with consular rank of the army in the new (?) province of [Mesopotamia (?) ___].' (Campbell 1994, no. 42).

At the first sight, one will say it is a tombstone of a military that mentions his career. All true! But, at a closer look, it reveals that this Tiberius Claudius Maximus was more than a military who was just looking after his career.

Our character was born around AD 65 – based on his reward during Domitian's war on the Dacians that ended in AD 89, and the fact that at the beginning of the Parthic War of Trajan in AD 114 'he was still physically in fighting condition' (Speidel 1970, p. 143).

He started his career as military legionnaire – proving his Roman citizenship – but he does not mention his first position as a private (*miles*), he was enlisted directly as a cavalryman meaning either extraordinary high requirements[1] or the influence of his military family

[1] Herodian mention the case of the future emperor Maximinus I Thrax (AD 235-238): *'...he was drafted into the cavalry because of his size and strength*. After a short time, favored by Fortune, he advanced through all the military ranks, rising eventually to the command of armies and the governing of provinces.' (Herodian, 6.8.1).

tradition (Speidel 1970, p. 143). The rest of the text may be considered as an argument for the first hypothesis.

The very next position he achieved – *factus quaestor equitum* (treasurer of the legionary cavalry) – already draws our attention to this character. Normally, the military payment funds were kept by *signiferi* who were also in charge of savings. M. Speidel has already forwarded the hypothesis that the mentioning of a *factus quaestor equitum* indicate that this military unit may have been something special having their own fund (Speidel 1970, p. 143).

The following rank of Tiberius Claudius Maximus is already one of a highly prestigious stature in the army. Being a *singularis legati legionis* – mounted guard of the legionary commander - reveals another promotion in a special unit of the Roman army.[2]

Besides guarding the commander, these *singulares legati legionis* were charged with special tasks, such as carrying letters for the province governors, as well as to Rome (Rankov 1990, p. 167).

In battle, the *singulares* 'stood around the commander' ('ἀμφ' ἀυτὸυ Ξευοφώυτα') (Arrian, Ektaxis 22) and served more like a 'personal guard, a genuine bodyguard' (Pavkovič 1994, 227). A papyrus from a hospital doctor records the death of 15 *singulares* 'besides the legionaries and evocati', 'possibly to emphasize the severity of the action in which they fought' (Speidel 1978, p. 48-50; P. Ross Georg. Ill, 1).

Tiberius' combined abilities – both military and intelligence ones – have helped him to be promoted as a *vexillarium equitum legionis* (the standard-bearer of the legion cavalry). A position which is very scarcely known in the sources, possibly indicating another role with dual tasks. So far, only two or three such *vexilarii equitum* were assigned in a legion (Speidel 1970, 145). According to S. Zehetner, they were assigned to combined fighting forces in the fortress and they were placed under a special command (Zehetner 2018).

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[2] Flavius Josephus, De bello Judaico 3.VI.2: *"De singulis enim turmis proprios centum et viginti equites deputatos habebat. hos sequebantur, qui expugnandis civitatibus ma chinas et caetera tormenta portarent, deinde rectores, itemque praefecti cohortibus tribuni, stipati lectis militibus."* [After these came the peculiar cavalry of his own legion, for there were a hundred and twenty horsemen that peculiarly belonged to every legion.]

While holding this position, Tiberius intelligence and military abilities are now officially recognized. During the Dacian war of Domitian (AD 86-87), Tiberius Claudius Maximus was decorated (*dona militaria) ob virtutem,* possible by the emperor himself, as all the wars were fought under imperial auspices (Speidel 1970, 145-146).

Then, a new episode in the life of Tiberius Claudius Maximus, points towards the selection of this character to become one of the best intelligence officers of the Roman army.

Under the reign of the emperor Trajan (AD 98-117), Tiberius Claudius Maximus was promoted as a *duplicarius* (double-pay man), a junior officer in the elite cavalry unit of *Ala II Pannoniorum*. As demonstrated by M. Speidel: 'It confirms the preference given to men of the guard or on the staff of the commanders. Such men were *the pick of the soldiers, and moreover went through a special training so that they would be able to impart high and uniform standards of combat efficiency to the troop*.' (Speidel 1970, 146). Normally, such a promotion was conferred by the commanders of the provincial armies. However, in the case of Tiberius Maximus this process was sanctioned by the emperor Trajan himself, probably during the first (AD 101-102) or the second (AD 105-106) Dacian war (Speidel 1970, 146).

It was in this elite cavalry unit where Tiberius Claudius Maximus proved his worth. He was assigned to the special mounted unit of *exploratores,* who were, officially in charge with reconnoitring tasks and they have their own commander (Speidel 1970, 148). All the ancient written sources available mentioned that this special unit moved ahead of the army (Arrian, Ektaksis 1,1), and, while camping they were located near the gate (Hyginus, *De munitionibus castrorum* 24).

According to the military historian Publius Flavius Vegetius Renatus, an *explorator* detachment of 'trusty and experienced soldiers well mounted, to reconnoitre the places through which he is to march, in front, in rear, and on the right and left, lest he should fall into ambuscades. The night is safer and more advantageous for your *spies* to do their business in than day, for if they are taken prisoners, you have, as it were, betrayed yourself.' (Vegetius, *Epitoma rei militaris* 3.6) and adding that these scouts may 'sometimes either suspect or discover the decampment, or traitors or deserters give *intelligence*) (Vegetius, *Epitoma rei militaris* 3.6).

The Roman army was an excellent machinery that knew how to gather as much intelligence as possible from all possible aspects (Gichon 1989, p. 154-170; Ferill 1992, p. 17-29).

The use of military scouts has a long tradition in the Roman history. During the Roman republic the *speculators/exploratores* are widely reported for collecting military intelligence on enemy's movements, spreading misinformation behind enemy lines and obtained information in preparations for future field operations (Austin & Rankov 1998, p. 97-99; Del Hoyo 2014, p. 403-404).

As demonstrated by I. Syvänne, it is a well-known fact that the Romans 'obtained intelligence from foreign lands through a variety of means: 1) military expeditions; 2) by sending spies (included diplomats etc.) and scouts and patrols (***Exploratores***) over the border; 3) by interrogating prisoners; 4) by questioning foreign embassies and traders and travellers; 5) by interrogating their own traders and merchants; 6) from intelligence reports sent by their foreign allies; 7) from Greek geographical works or narrative histories (Syvänne 2016, p. 111).

Figure 2. The capture of king Decebalus on Tiberius Claudius Maximus' tombstone (http://lupa.at/19572/photos/3)

It was in this cavalry unit that moment in Tiberius Claudius Maximus life when he proved worthy of being one of the best intelligence officers of the Roman army.

As described by M. Speidel, the upper part of Maximus' tombstone is depicting him 'galloping towards an enemy, holding in his left hand two spears and a round or oval shield, while in his right he wields a sword, drawn and ready for action." (Speidel 1970, p. 149) (Figure 2). One may say, just another heroic

scene on a funerary stone, nothing unusual! Except that the fallen enemy with a hexagonal shield, sickle- sword, and pointed Dacian cap is none other than the Dacian king – Decebalus! The iconographic scene from this tombstone is confirmed by the similar one on the famous Trajan's column in Rome (Figure 3).

Figure 3. The suicide of Decebalus on Trajan's Column (https://commons.wikimedia.org/wiki/Trajan%27s_Column_-_Cichorius_Plates#/media/File:106_Conrad_Cichorius,_Die_Reliefs_der_Traianss%C3%A4ule,_Tafel_CVI.jpg)

How Maximus has collected intelligence to find out about the escape and the route of the Dacian king we will probably never find out. But, for certain, the intelligence was good as Maximus was seconds from preventing Decebalus to commit suicide (Figure 4).

Figure 4. The attempt to capture king Decebalus by Tiberius Claudius Maximus. (Connolly 1989)

And, we are not discussing here about any local chieftain but the Dacian king Decebalus, who had the admiration and respect even of his enemies: 'This man [Decebalus] was shrewd in his understanding of warfare and cunning also in the waging of war; he judged well when to attack and chose the right moment to retreat; he was an expert in ambuscades and a master in pitched battles; and he knew not only how to follow up a victory well, but also how to manage well a defeat. Hence, he showed himself a worthy antagonist of the Romans for a long time.' (Dio Cassius, Ῥωμαϊκὴ Ἱστορία, 67,6,1).

It was Maximus who brought Decebalus' head to present to Trajan at the place *Rannistorum* (still, yet to be specifically identified in Romania) as mentioned on the tombstone '*lines quod cepisset Decebalu(m) et caput eius pertulisset ei Ranisstoro*'. Another important military fact, as it also appears on Trajan's column (Figure 5) and mentioned in the literary sources (Dio Cassius, Ῥωμαϊκὴ Ἱστορία, 68,14,3), symbolizing the total defeat of the enemy and the end of war.

The rewards for this extraordinary achievement followed rapidly, Tiberius Claudius Maximus was twice decorated in the Dacian war. From his tombstone, the decorations must have been silver *torques* (necklaces) and *armillae* (arm-rings) (Linderski 2001, p. 4-6).

It was probably now, that Maximus was promoted to the rank of *decurio*, commander of a cavalry unit.

Maximus military career did not stop here. He remained with the army in the Parthian war of Trajan where he was again decorated.

His tombstone mentions that he was honourable discharged – *missus voluntarius honesta missione* – meaning that he has served more than thirty years in the army. At the same time, the term *voluntarius* indicates that he continued to serve after the completion of his term, 'willing to put off his discharge' (Speidel 1970, p. 151).

Figure 5. Trajan shows Decebalus' head to the army. Trajan's Column, scene cxlvii. (Speidel 1970, plate XV. 2)

Conclusions

Tiberius Claudius Maximus was clearly a man of arms and intelligence born under the sign of the goddess Fortuna. One of the most highly decorated Roman soldiers ever known, he made his way into history by being brave, intelligent and (…) lucky!

He is one of those rare cases in history when brave humble characters – with no political or military major role ever played – are fortunate by history to have their facts somehow surviving over time.

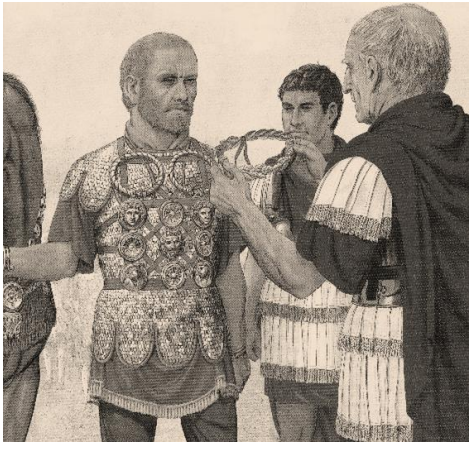

Figure 6. The decoration of Tiberius Claudius Maximus by the emperor Trajan. (Connolly 1989)

What a strange game does history play!

To have precisely the tombstone of Tiberius Claudius Maximus discovered by a farmer while ploughing his field and, thus, to fill in a gap on the Roman history episode – the capturing of the last Dacian king by a brilliant intelligent officer of the Roman army, otherwise unknown.

And so, one local episode of the duty of an intelligence officer has become a worldwide image on ending a war – the Dacian war!

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#GEOPOLITICS –
"NEW ARGUMENTS, OLD GEOPOLITICS": REGIONAL SECURITY AND DIPLOMACY

A NEW CONTAINMENT STRATEGY IN ASIA

Mihnea Alexandru CIOCAN*

Abstract:

In an ever changing geopolitical environment the struggle for dominance remains a constant. Today we are on the edge of a new bi-polar world, but this time with the US and China as main actors. In this conjuncture each of these states will try to dominate and enlarge their sphere of influence, and, if possible to restrict the other part in expanding theirs. And it will also be a battle for acquiring allies. As such, rather than direct confrontation, the US policy towards China may aim to resurrect an old strategy of the Cold War, the containment of the enemy, adapted to the new realities. The idea is to institute a political blockade to prevent the Chinese enlargement of its reach, especially in Asia and Africa. In this endeavour, the US needs strong allies in Asia, and the best candidates are the countries that have a democratic regime, mainly Japan, South Korea, Australia and India. The theoretical concept stipulates that a "quadrilateral of democracies" can be created from these states, with the US in the role of the organizer and promoter of this non-formal alliance. Its purpose would be to stop the advancing Chinese influence in South East Asia by creating a barrier against Chinese hegemony and a counter-pole of attraction. Of course, should this task prove effective, other states may join as well? The main beneficiary of this construct would be the USA, because the barrier would represent the first line of defence for Washington's interests in the Pacific area.

Keywords: *China, containment, democracies, doctrine, geopolitics, United States.*

Introduction

The geopolitical landscape of the world tends once again to seek its balance, be it in a multi-polar or a bi-polar version. Settling down the waters of uncertainty is a rather natural phenomenon, as prolonged turmoil is not beneficial in the long run for most of the countries. Both

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scenarios are plausible, but are not of equal value in terms of probability. At this moment of moderate-to serious uncertainty it may appear that the world could indeed have 3 or 4 big actors on the political and military arena, naming the United States, China, the Russian Federation and maybe the European Union, depending on the internal level of cohesion and the political power that is portrayed in the outside (Olivié & Gracia, May 2020, p. 39). But in the medium and long term it is most likely that the international stage will segregate again into 2 opposite factions, like it did in the post-war period. Judging by actual vectors of power the main antagonists appears to be China and the US, and consequently each one will try to find important allies to deter the other side in pursuing its initiatives. Also it needs to be stressed that since the 2nd World Conflagration the concept of "war" evolved and in modern times it should not be understood just as a simple confrontation between two armies, but as a clash of political and economic systems, a clash where the armed forces are just the instruments of exerting power.

This paper aims to shed some light on one particular part of this "geopolitical dance-floor", meaning the contest for regional domination in South-East and East Asia, as well as in the Pacific Area. The study focuses on one possible measure that could be adopted by the US in its effort to stop the Chinese influence and hegemony.

This measure consists in sustaining a form of a non-official agreement of the democratic countries in Asia (conveniently including Australia, even if geographically it is not Asia, it is economically tied up with this continent), with the main purpose of reducing China's economic and political grasp over their own countries as well as the other smaller countries. Simply put it would be an alliance based on the principle "strength in numbers", and through this would benefit both the countries directly involved, and the United States. The idea is simple and was used before, in the Cold War with USSR - rather than face the enemy in direct combat and risk a lot of lives and resources, better use containment barrier to stop its advance. Such a strategy is simple in theory, but much harder to implement. Practically we are talking about a geo-political corridor made of the four main powers that have a democratic regime in Asia: Japan, South Korea, Australia and India,

which would make a so called "Quadrilateral of Democracies" that could partially encircle China. It is not about a proxy war conducted by the US, but a form of "fencing" the Chinese ambitions. In some other variants in the literature, the Quadrilateral would be composed of India, Australia, Japan and the USA, but in this case it could not be called exclusively an alliance of Asian democracies. In fact this alternative setting does not invalidate the concept behind it - whether there are three Asian countries (a triangle) plus the USA or four Asian states and the US in the role of the magister does not change the facts. Still, for the next parts of this analysis the Quadrilateral will be considered to be that of the Asian states, with back aid from American side, but without the US as a formal member.

The main question in this theoretical scenario is if it is feasible in real world or not, since the four states mentioned above are all too different in culture, economy and, most important, do not share the same political goals. On the other hand, a joint position would be beneficial for all, in the face of a greater danger, meaning to become a satellite state under the influence of Beijing.

The objectives are as follows: to highlight the pros and cons regarding this theory and to evaluate academically what the chances of success for this endeavour are. Since this is not an actual fact but a hypothetical one, all the arguments and all the logical implications must be considered keeping this aspect in mind. This is the foremost drawback of the study: the fact that all are just simple suppositions that could become reality, or not.

Other limitations derive from the main condition, as there are a multitude of hypotheses, arguments and counter-arguments that this paper cannot cover. Moreover, the entire analysis is envisaged only from the US point of view regarding this containment doctrine, but in reality it can be other way around too, and China can also make efforts to confine the United States on both its coasts, by rallying the Pacific states on one side of the US and the EU on the other side.

The present paper is addressed to anyone interested in geopolitics, especially on the struggle for dominance in the SE Asia theatre. Still for one to be able to understand all the connections and

implications of these intricate movements of all the state actors, a basic level of geopolitical knowledge is desirable.

Methodology

Considering the nature of this study, the methodology consists exclusively in a qualitative research of academic resources such as scientific articles, work papers, and various primary and secondary data sources. These issues are combined in an integrated logical argumentation with historical elements and facts that are relevant to the principles and doctrines referred to in this work.

The Containment Doctrine

After the Second World War, for a brief time, the world had only one real super-power, the United States of America (despite Stalin's army strength, USSR had no nuclear capabilities). But shortly after, the Soviets caught up in the atomic weaponry field as they developed their nuclear arsenal between 1942 and 1949; and by this the world turned into a genuine bipolar setting, both in military and ideological terms. At that moment US citizens did not want another devastating war with USSR, but at the same time US administration (under H. Truman) was determined to stop the advance of communist ideology in the less developed states from Asia, Africa and Central and South America. What was to do? One possible answer came in the form of the Containment Doctrine, a plan based on George Kennan's vision (Kennan, February, 1946) expressed in the famous 1947 X article (or Long Telegram). In this Kennan expressed a few hard but very concrete realities of that day: communism will be in a perpetual conflict with the capitalist world, the Soviet Union will assume the role of promoter for the socialist cause and, more important, since the two systems cannot co-exist peacefully, eventually the communist world and the capitalist one will be in open conflict. Many of these considerations emerged from the deep feeling of insecurity specific to Russian elites and not after "honest and objective appraisal of facts" (Kauppi, October 1994, p. 620).

In these conditions, the United States had to find a way to stop the red expansion; it was a matter of survival - if the Marxist-Leninist

ideology would engulf too much of the world, the Leftist side would became too powerful, and that would be a direct threat to America's interests and even to the US itself. Truth to be told, by the end of 1949, the communist side gained a strong overall momentum, marked by two important milestones: the USSR successfully tested a nuclear device (RDS-1) on the 29th of August and Mao proclaimed The People's Republic of China on the 1st of October, with China becoming the 2nd biggest communist state of the world. Since going to war with the other super-power and its strong allies was the least desirable option for the US and since the bilateral communication ways were less and less feasible, the plan was to halt its advance around the globe. It was an indirect diplomatic movement in the sense that the US sought to convince various nations not to rally behind the red flag. It was also a kind of compromise: what was done was done, and the US would attack neither the USSR and its back-yard states nor China, but would take action against any other attempts to spread communist ideology in other countries. In 1948 Kennan expressed that the Administration "should identify those areas of the world that were crucial to US security in the sense that they could not be permitted to fall into hostile hands" (Mayers, 1986, p. 147), meaning that the US should secure an overseas "ring of fire" for its own defence.

This grand strategy of containment was considered suited for the early days of the Cold War, but as years passed by it proved to be very costly. Therefore, in the '80s Stephen Walt proposed that containment could be refined into a derivate concept, one of "finite containment". There is a strong resemblance between these 2 theories, in the way that the US should continue to support Western Europe, South Korea, Japan and the oil states in the Middle East. But there is also one major difference: the anti-communist containment will be enforced only in certain regions, those specific areas that Kennan considered to be vital industrial centres, not in all Third World (Walt, 1989, p. 9-10) states. Somehow this can be seen as a selective restriction for communism, and was caused by the decline of the USSR in terms of economic and political capabilities to expand its ideology. Simply said, why should America invest resources in areas that did not represent a

key point for its strategy? In the end it is but a calculus of minimizing effort and simultaneously maximizing effects.

It is important to emphasize that Kennan's geopolitical idea was built along the same line with Nicholas J. Spykman's theory of *Rimland*, a thesis regarding the true importance of an area, based on geographical factors and geostrategic considerations, and applied to the Eurasia. He argued that the Rimland of Eurasia - consisting of the outer zones (or the "marginal crescent") of the continent, encompassing the regions located (on global scale) near the main bodies of water - was in fact of much more strategic importance that the Heartland, represented by the immense Siberian fields and plateaus. So, in his view, almost all Europe, Asia Minor, Middle East, India and Indochina, mainland China as well as Russian extreme orient was the zones of development due the advantages of resources, population as well as cheap waterways for transport existent in proximity.

If we consider it, the theory holds water and can be extrapolated to other continents as well - North America has its East and West coast as main areas of development (plus the Great Lakes area), Africa has Maghreb & Mashriq in the North, South Africa in the southern tip and the Gulf of Guinea in the middle, South America and Australia have their East Coast much more evolved than the middle of continent. So in a way the entire human culture is somehow contained by geography as well. In his theory Spykman also referred to the fact that the balance of power in Europe and Asia would automatically impact US security because, if only one political entity (or even a state ideology common to all countries) controlled all the aggregate resources of the Eurasian landmass, then such a concentration of power would cancel any advantage that the US had (Walt, 1989, p. 13).

Kennan's vision and concrete proposals were not altogether accepted by all the analysts of those days. Walter Lippmann, for example, underlined that it was faulty and couldn't be well implemented. Moreover, any attempt to do so would be a failure for America's internal morale and external prestige. In his opinion, this doctrine had a problem with prioritizing actions and in distinguishing vital economic and political interests (like Europe) from peripheral ones (naming Asia). Not to mention the costs involved for US military to

be able to cover all parts of the world where communist threats might have appeared. Lippmann also dismissed the importance of ideology in USSR, and stated that direct realist interests like self-defence and balance of power were the main determinants of Moscow's policy (Mayers, 1986, p. 137).

In practical terms, this Containment strategy was materialized in various movements made by the US, both on political and economic sectors. Firstly, the USA sustained rebuilding Western Europe, with the help of the well-known Marshall Plan. It was a necessary action for two main reasons: 1. capitalist Europe would be an extremely important ally in an eventual conflict with the Russians since it could serve as a buffer zone and a battleground outside American soil, and 2. because the war industry was reverting to civil production and Europe would prove to be a very profitable customer for American products. Secondly, there were the armed conflicts in which the US took part directly against local communist forces heavily assisted logistically and technologically by USSR and China: Korea and Vietnam, plus the non-official involvement in Afghanistan. Thirdly, although officially it is not part of containment doctrine, the US managed to reduce the Marxist-socialist threat in Latin America by backing some nationalist governments and leaders, even if these persons showed serious dictatorial inclinations.

On a cold-minded scrutiny this containment strategy worked only partially. Because the communism system did not engulf the entire world in the fifties and sixties, it can be seen as a success, but in fact it is a rather moderate one. The costs were indeed very high for the US and the western world; the armed conflicts were stalemates (see Korea) or defeats (case of Vietnam), the spheres of influence remained relatively constant, especially in Europe, and neither side could get the ascendency over the other. In the end, the USSR collapsed mostly because of internal system failures and economic shortages. It is true that in a minor way maybe the containment helped USSR disintegrate, but it was by no means the principal factor. Still, the idea in itself had some potential, if the implementation had been conducted with much more diligence from the US policy makers.

Current and future geopolitical conjuncture

The last period of the last 20-30 years big scale geopolitics was marked by the United States' world hegemony in conjunction with the rise of the "eastern dragon". Nowadays, the reality is that China is a global superpower both politically and economically. Maybe the country isn't yet fully developed in terms of internal infrastructure, social wellbeing and military strength, equipment and, even if it does not equal the powerful US Army & Navy yet, it is, nonetheless, comparable. In terms of dominance, China is now in the middle of the phase of acquiring allies and gaining footholds around the world. The Chinese are not as powerful as they present themselves or as they would like to be, but are much stronger than other geopolitical players would desire. So the actual geopolitical environment presents a dominant power that is showing some signs of slow decline, especially due to internal social, economic and political shortcomings and a rising (red) star that benefited greatly from the economic boost determined by globalization in combination with a savage exploitation of its main natural resource: very cheap human labour.

This course of action can lead to competition or cooperation, in theory. But in reality, it is most likely to generate a fierce competition, prolonged for a significant period of time, maybe even decades. It is no secret that China is engaging on a path for more self-sustained development on internal level and is assuming "a key role in the creation of a new international architecture challenging American global leadership" (Santino and Regilme, 2018, p. 10). This being said, there is a serious risk that at some point the two great powers will find themselves in an open conflict, if they cannot avoid Thucydides Trap. The clouds of a Sino-American war (that may very well be the Third World War if we consider that both are major nuclear powers) are in the headlines for some years now (Allison, 2015), and under Trump's Administration things went from bad to worse. Despite the fact that this geopolitical metaphor is overused and it is presented as an inevitable fatality, it should be noted that it is not absolutely necessary to have a war, even if the probability is quite high. Thucydides Trap has serious flaws. First of all, it presumes that a country can chose to develop up to the point where it would either enter a conflict with the existing

hegemonic power or remain at a lower level not to upset the leader. False, no country in the world would voluntarily stop its evolution into a great power out of fear, even if this means war. Secondly, the theory proved wrong in the Cold War era, so it can be wrong again. Still let us assume that, at one moment in time, there will be a war between these 2 states. Obvious one will win, but it will be a disaster, a Pyrrhic victory because of the casualties and material destruction. Who would benefit? Any other pretender to the world leader's seat and the main candidates are the EU and Russia, but this list is not exclusive. In fact, a war between China and the United States it the least desirable option for both of them as long as neither has an absolute upper hand.

Anyway, since we are still in the field of theories and suppositions, in this particular matter of whether the Trap can be avoided or not, the debate is still ongoing. There are multiple points of view, all fairly plausible and logical in essence. In the (ultra) neorealist rhetoric, the war between two great powers is not analysed in terms of "if", but "when". Indeed, if states were to judge all aspects of geopolitics independently (as not in a bigger picture) and only by the realist principles, then each of these actions would slowly drive the big powers to war. Metaphorically, it can be seen as a maelstrom gradually attracting the players into war, and each action would just get them one step closer. For example in J. Merasheimer's offensive realist theory it is stated that the anarchic nature of the international system drives states to adopt an aggressive stance in order to secure an advantage, and by this a violent clash is more like to occur. State safety issue is perceived as a simple (and over-simplistic) equation of political, military and economic strength: maximize power to ensure a solid security (Johnson, Phil, and Thayer, 2016, p. 3). Regarding the explicit case of China and competition for power in SE Asian theatre, Mearsheimer asserts that the rise of this pretender is a capital security threat for the US, "with considerable potential for war", since "China cannot rise peacefully" (Mearsheimer, 2010, p. 382). Still, in some of his previous works (Mearsheimer, 1983), Mearsheimer admits that conventional deterrence is indeed a useful instrument in convincing an enemy not to undergo certain actions. The US used this type of action against USSR in the Cold War era, in addition to the nuclear stalemate, and, in the end,

proved to be quite fruitful. Even the author admits that "prospects for conventional deterrence in some future crisis are quite good" (Mearsheimer, 1983, p. 212), and what else this quadrilateral (or triangle) of Asian powers would be, if not a form of discouragement for Chinese ambitions. So, even if from the realist point of view the Trap seems virtually unavoidable in the long term, there are still some possibilities (yet in compliance to the realist principles) according to which the war can be postponed indefinitely, and therefore, *de facto* avoided.

In contrast to neorealist views, J. Nye brings a different perspective regarding Thucydides' Trap. He states that the rise of a new great power in itself isn't the actual trigger for war, but the fear (of losing hegemony) induced by the unfolding events in the other side (Nye, 2006, p. 74). It is a paradox: fear of conflict ignites the flame of war, by determining one side to start mobilizing and making preparations, a sign that the other side perceives as a threat and starts its own military development programs. In the end, this arming spiral and ever-growing tension require just a spark to unleash a full-scale bloodshed. As such, one logical conclusion is that if the fear factor is removed, the pitfalls of realist geopolitics can be avoided, or at least their unfavourable effects can be diminished. Nye argues that there is no need for war between the great powers; if both China and the United States understand that cooperation is mutually beneficial for both and adopt a peaceful position one towards the other. Regarding the confinement theory applied to China, Nye dismisses it and underlines that China must be integrated in the geopolitical landscape (Nye, 2013). Containment and armed deterrence are elements of a long gone era, and are not suited for 21st Century politics. China cannot be so easily fenced and one strong argument is that in the Cold War Era there were almost no economic relations between the US and USSR; the situation is totally different now, as China is strongly integrated in the global trade flow.

These opinions can be seen as the two extremes of an imaginary spectrum of viewpoints. One states that war is inevitable and the other one argues that war can be prevented and peace can be maintained. But there are some middle-positioned theories as well. For instance, S. Walt states that the US has many incentives to remain

an active player in Asia and to make "it harder (though, of course, not impossible) for China to project power elsewhere in the world (including areas closer to the United States itself)" (Walt, 2020). But unfortunately the result would be a null-sum outcome, meaning that one side wins and one side loses (Walt, n.d). For the winning side it is good, although for the entire global political and economic environment these circumstances are not the best, and that is why both a live war and a cold war should be prevented. In the same range of perspectives we can place the idea expressed by Y. Yuan in what he names "The Churchill Trap" (Yuan, 2018, p. 200) (as opposed to Thucydides' trap), meaning another long cold war between China and the US that would not be beneficial to anyone.

In conclusion, at this moment, there are more theories regarding the future geopolitical landscape and each has its own fair arguments. Some variants sustain that we are going towards a bi-polar world China versus the USA, which will lead to conflict. Other opinions are more in favour of a multi-polar world, with three or four actors. This setting would be much stable in terms of war because it would make much more use of the principles of the balance of power. An arena with multiple players would imply more 3-way or 4-way petty frictions, but would reduce greatly the peril of a catastrophic nuclear conflict. For example, D. Acemoglu express that a bipolar world may be more unstable than a quadri-polar one because it "would heighten the risk of violent conflict" (Acemoglu, 2020).

At this moment nothing is clear and all these suppositions could became reality. But, on a deeper analysis, in the long term, the bi-polar scenario has more chances to come true. Even if in the near future the world will be multi-polar, in time only 2 sides will be outlined. It is the natural phenomenon of polar attraction that will create these factions, each one composed of one alpha and multiple acolytes. Of course, there will still be countries that will stay out of the game, like there were in the Cold War era, but these will not act as a factor for balancing power or as an arbiter, but rather as passive spectators.

To be fair it must be remembered that on a theoretical level there is another alternative, a non-polar world, be it in a form of complete anarchy or as a much deeper globalized world, in which there

are no great powers and no underdogs. This means that most of the states are equally comparable in power; there is neither hegemony nor desire for dominance. This is less likely to be feasible because even in anarchy there will be entities that will want to rise. On the other hand, it is even less probable that all the states have a quite equal level of might and influence.

Analysing all these possibilities, the one with two-world giants seems not only to be plausible but also to have the best odds to occur. Therefore, for further analysis in this paper we will consider this scenario, even if it is not a certainty. This examination is not invalidated if America has a democratic or republican president. Either way China will be a competitor for the United States on all accounts. What is true is that the relation between Beijing and Washington can be more open or, on the contrary, more distant, according to the US external politics and vision. At one moment in Trump's mandate it seemed like confrontation was almost inevitable (Rachman, 2020). Fortunately there were no military clashes. With the beginning of the third decade of the century and with democrats back in power it is possible to witness a milder tone in White House rhetoric, but this does not mean that the USA is not keeping a close eye on its challenger's movements and that it will not try to undermine any form of regional Chinese expansion into SE Asia. Most likely there will be a "chill war", if not a Cold War in all its meanings. Practically the fact that Democrats or Republicans are in power in one instance or another has only a marginal impact on the competitive phenomenon between these giants.

The Containment Doctrine adapted to modern times

There is a well-known saying that history repeats itself. Not entirely true, but not completely false either. History never repeats the details because circumstances are never the same, but, in the big picture, some situations in the present are, in some ways, similar to ones from the past. Nowadays we are facing a possible Cold War, waged once again between communists and capitalists, both sides in possession of nuclear powers. Still, there are a lot of differences: China's communism is an original one, closer to capitalism than to pure Leninist thesis, the economy is globally connected and integrated, Beijing has

substantially more financial resources due the fact that China is one of the top industrial manufacturers, the world is not (yet) strongly divided and there are multiple players in the arena. This being said and considering that actual war is the least desirable action, the US could try to resurrect the old containment doctrine and to adapt it to modern times.

The essence of the plan remains the same: politically and economically encircle China and keep it at bay, in its own territories. What changes is that, hopefully, there will be no fighting between satellite states and the Chinese army, although the situation in Taiwan could escalate to an open conflict any day. How can this be put to work remains to be seen, but one plausible alternative is to create a zone in Asia that opposes Chinese influence. This initiative is purely speculative at this moment, as no serious actions have been taken so far. Everything is still in the phase of theoretical discussion of what influence levers could be pulled. The fact is that both sides could do the same thing and try to attract smaller countries in their slipstream. On the US side, the scheme is to capacitate 4 big countries in the area to form a sort of an informal alliance directed against Beijing hegemony. The notion of "big" represents in fact the extent of importance, and it can be translated at the same time by economic power or geographical features. In this sight the 4 countries will be Japan - because of its economic and technological power, South Korea - for the same reasons, Australia - for its resources and massive landmass and India because of its greatness in area and population and also because of its nuclear capabilities.

The metaphoric name of this theoretical construct was chosen to be the "Quadrilateral of Democracies" (Madan, 2017), or the Quad/Squad in its compressed title. The idea is not particularly new; it was postulated in different forms, only that it did not have a geopolitical dimension in the beginning. First attempts of a stronger collaboration were made after the 2004 tsunami in the Indian Ocean. Afterwards, different attempts to form a greater alliance between the maritime powers in Asia (except China) occurred, but all ended up indecisively. At that time China was indeed seen as a threat, but not at the scale that is today, so each time some of the members backed off from the initiative. But the actual situation is quite distinct. Xi's regime showed

very clearly (even if never admitted officially) that China aims to be the true master of Asia. It is logical that Xi's China would not want an open war with the US and its allies and would gladly avoid the aforementioned Trap of Thucydides, as long as their strategy of expansion continues. The tasks of constructing artificial islands with anti-ship missiles outside territorial waters, building military bases in Countries like Cambodia and Djibouti, the increasing pressure put by Beijing on Taiwan and the growing presence in Central Asia and even Africa bare witness of China's actual intentions. Against this setting, there were attempts to invigorate the Quad a few years ago, but nothing concrete was achieved and success is still elusive. Maybe when the situation escalates to the boiling point, the wheels will be put in motion and a mutual understanding (official or not) will be in force.

For the states concerned, this alliance would help them remain largely independent of Beijing's will. Each one taken independently is no match for China: Japan, despite its technology, has no army, has no land to expand, population is ageing and economy has been stagnating for many years; South Korea is small and even if it is a high-tech country, it cannot withstand alone; Australia has the land but is mostly a dessert, has very little population and is dependent on China for exports of raw materials. And, last but not least, India has the population and some military strength, but the economy is low compared to the Chinese one. Each one in part cannot challenge the dominant power, but all 4 combined would gather enough strong points to counter-balance Chinese vigour and, with United States' support, to bring stability to the Asian theatre in matters of influence and power.

For Washington, this agreement would act like the barrier the US put on USSR in South - Central Europe and Turkey back in the Cold War era. Like then, it would represent a line of defence in case of need far away from US land but very close to Chinese mainland. What else to ask more than an encirclement of the foe in his own proximity and using someone else to do the job.

For the moment the battle is carried out at the level of influence and its main peace-time instrument to achieve these goals is the economy. Multiple countries in Asia are, to some extent, dependent on Chinese economy, and, in addition, their initiative of The Belt and Road

(former One Belt, One Road) promised a lot of benefits to some of these less developed nations. How to counter this? Only by rallying some powerful economies and bringing them together so that they can oppose the Chinese economic takeover, both in their own turf as well as in other smaller countries from this region. The economic sphere is the first battlefield of this clash. In general, what this confinement strategy should do is to monitor and thwart any initiative that targets a vital point or sector. Where Chinese controlled firms move to secure an asset or take a strong point in form of resources or strategic infrastructure like ports, airports, railways or telecommunications and power grids, there should be a counteroffer or a counter move that would compete with the Chinese. Much like in the 5G affair, but extended to multiple domains. Obviously, not all propositions would be accepted by the host countries and some would indeed get into business with Chinese partners, but at least some could be diverted.

At the commercial level, the dependency on PRC's home market on both its flows – in and out – should be reduced as much as possible. Take for example Australia that is predominantly dependent on the contracts with Chinese manufacturers (but, in fact, with Beijing government because everything is state controlled in China) for raw materials. At the moment, there is little alternative for these goods to be sold elsewhere, mainly because transporting them on a longer route means extra money to be paid, and, therefore, less competition. Furthermore, the forecasts show an even greater increase in trade between these two lands as Chinese economy is expected to keep growing by 2030 (Laurenceson and Zhou, 2019, p. 7). Economically speaking, it may be good for Australia, but politically it is not so great. In fact "the rapid growth of China's economic influence and presence has actually fuelled rather than allayed deep-seated, visceral concerns about Australia's long-term security" (Beeson and Wang, June 2014, p. 580). Even in the case of ASEAN, things are not much better. These states seek to continue their expansion on the Chinese domestic market to sell their products. Indeed, "the growth of the Chinese economy necessarily means it has also become a globally significant buyer of exports from other countries" (Park, November 2007, p. 486). All these spell in fact deep dependency on China's preferences, and its political

leaders know all too well how to exploit this. Unfortunately, at the moment there isn't much to do; geography dictates the profitability: China is near, the USA and the EU are far away.

Things may change significantly if some kind of arrangement is made in economic sectors, even if driven by political motivation. It could prove effective even though it not so economically orthodox and in line with libertarian theorists that advocate *laissez-faire* and non-involvement of the state in economic affairs. Maybe Australia will not be solely dependent on China any more, Japan will find a greater market for its products and also India's average standards of life could improve.

The second sphere of confrontation is the state security one. At this moment China is on the move to acquire momentum and influence by intimidation and force. It does so because there is little coherent opposition, or where it is mainly declarative or in a form of a few joint military and naval applications. In this matter Beijing has both main advantages: it has the manpower and the technology to equip the army. None of the other states in Asia (except maybe the Russian Federation) can match PRC's army. Only if the 4 democracies form this sort of alliance that some called it "an Asian NATO" (Mehra, August 2020, p. 10) could they hope to deter China's plan and to hold the line together. In this case the US aid is mandatory, both tactically and politically. For example, Shinzo Abe proposed a new Grand Strategy that would allow Japan to exit the passive state and become a greater military force at global scale, in the idea of maintaining peace but also self-security (Akimoto, 2018, p. 181-183), but this move implies first adopting an Amendment to the Constitution that the US enforced on Japan in 1947, and that clearly states in Article 9 that Japan should not develop offensive armies, heavy weaponry, medium and long range missiles, potent war fleets with fleet carriers or non-conventional weapons. All military features that Japan may possess are for self-defence of its islands. Truth to be told under this disguise of self-defence force Japan is already planning some multi-purpose warships that can be used as attack helicopter carriers. But even so, the difference compared to PLA is enormous. The only way Asian states can counter China in terms of military might is by working together at local level and in a strong cooperation with the USA at a global scale. At a regional scale, Abe's

proposal is another form of a possible Quadrilateral, under the name of Democratic Security Diamond, in fact this being another initiative to draw the US further into defending Asian nations against Chinese ambitions. Abe even expressed that "together they needed to prevent the South China Sea from becoming a Lake Beijing" (Lee, 2016, p. 2).

The third and most comprehensive field of action is the political one. It is the most important because, in the end, both macro-economic and security branches depend on policy-makers. In fact, this is the first level where consensus must be obtained between the Asian powerful democracies. The US diplomacy will have a significant role in achieving this goal. It is clear that the partnership is mutually beneficial both for the US and the Quadrilateral on general terms, but between members would presume some small concessions, be it in terms of economic grants and commercial agreements or in terms of military coordination and dependencies. But political abilities are required to solve yet another old time problem - the historical dimension and rivalries. It is well known that between the Asian nations there were past conflicts and resentments are still deeply rooted in the collective mind. If politics and politicians can solve these setbacks and bring together all big democratic states in this region to form a coherent agreement set for medium and long term, then there is a chance that this power node could reduce China's influence and make Beijing think twice before venturing into their neighbours' borders via land and sea. Even more, if this Quadrilateral is to be successful it can attract more members, even if they are not military powerful. China is practically synonymous with strength in numbers and one (maybe only one) way to stop its grip is strength in numbers. This scenario happened before, with NATO, a mutual defence organization that became the greatest security provider for its members and that gradually expanded to the point that now encompasses 30 countries and it is present on almost all continents. Although this common agreement is not supposed to be a "NATO in Asia", it could borrow some of the traits and principles.

The good, the bad and the unexpected

The pros of this presumptive alliance for the Asian countries were already presented in the above chapter. Simply put, the main

benefit for the countries involved is that they would have a better chance to resist Chinese sway, both economically and politically. At the same time, the benefits would also be for the USA, and these are accounted at multiple points. As already presented, this Quad, regardless of its judicial form, would function as a first barrier of defence for the USA in case of real armed conflict between the super-powers. It is true that the modern warfare presumes using intercontinental missiles, submarines, cyber-war or weapons deployed in space (although using space-based WMD is illegal according to Article IV of the Outer Space Treaty,[1] in case of world war these treaties would be irrelevant), but in reality having a geo-political blockade around China is a great asset for the US. In the end, in case of conflict, these countries would be the best forward bases for military operations. On the other hand, if PRC decides to invade one or more of these countries, it would give the rest and the USA time to prepare a counter-offensive. So, at the tactical level, a "half ring" of US allies around mainland China would help either way the United States to respond better to any attack. Still, this scenario is the least plausible, since it would be the worst decision for both countries as mutual destruction does not help any of them.

On a lower intensity level, in case of a Cold War without military actions, the simple existence of the Quadrilateral would keep China busy in its own adjacency, and thus, at least in theory, it could reduce its bold movements of engrossment important strategic points around the globe, especially in Africa, Middle East or even Europe. Furthermore, such a security agreement between 4 of the main states in Asia could represent a catalyst for an even greater concordance. It is fair to note that, in SE Asia, ASEAN already exists, an official organization for cooperation in economic, cultural, technological, and educational field that comports a mutual security dimension as well. Still ASEAN's main purpose is mostly economic and, at a military level, the achievements are not spectacular. Besides, no state of those 4 that would compose the

[1] "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies", United Nations, Office for Outer Space Affairs, December 19, 1966, https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html, [accessed January 26, 2021].

Quadrilateral is member in ASEAN, so from this point of view there is no direct interconnection. Nevertheless, if the Quad proves to be fruitful in its mission, there could be closer relations between these 2 groups in the long run.

There are also some not-so-great aspects about the proposed Quadrilateral, some of them representing really strong counter-arguments. Firstly, at a military level, any initiative of this kind could stir the waters and create serious turmoil in Beijing. Any form of grouping, "however benignly calibrated would be viewed as creating rather than countering the conditions for an escalating regional security dilemma" (Lee, 2016, p. 32). China would perceive this as a serious threat and would deem justified to take immediate actions. In a way, what was supposed to reduce Chinese appetite for military offensive and conquest in modern terms, could very well initiate a conflict in the area, conflict that would inevitably attract the United States and maybe other big powers from Europe. This is the other side of the coin, and as it was already shown war is not desirable. So, if this Quadrilateral is to be operationalized, it must not cross certain boundaries that would trigger a furious response; at the same time, it has to be bold enough to meet its purpose. This aspect is yet another problem because if the initiative is too modest and only declarative, nothing important will be achieved. It is impossible to tell what those limits are; it depends on the abilities of the politicians and diplomats and the particular conjuncture of the moment. Another downside of the proposal could be represented by the internal strife between the members. In any hypostasis the situation in the region will be tense, both between China and the presumable Quad countries and within the group as well. The shade of confrontation makes everyone uneasy. Such dissensions can alter severely the effectiveness of the endeavour and the entire construct may be short lived. In addition, Chinese diplomacy will not stay aside, and like every great power, they know the principle "divide et impera". This is a systemic vulnerability of any organization, and since the participation is voluntary, in any moment one or more governments can choose to back off from this deal. If this event occurs, the whole build and containment strategy becomes obsolete.

And, of course, there is the unexpected factor. This entire argument of the Quadrilateral of Democracies and the new containment measures against China are based on hypotheses, not on concrete facts. Likewise, it is founded on the premise that those four countries do want to make this agreement for their own interest. However, in reality, this premise can be very well invalidated from start, or even sometimes after the formation of the coalition. Some of the states included in this list may not want to risk their relation with China, even if it is a de-balanced one. Often, the economic factors on short terms are more important over a presumable vision extended over a longer period. Other unforeseen turns of events may be even more spectacular. For example, India, which is also member in Shanghai Cooperation Organization (since 2017), an organization that was designed to be a counterweight to NATO by putting at the same table Russia and China, could lean towards this security framework if the auspices are favourable. So far SCO promised much but achieved little in terms of geopolitical influence, but in the long term things may change. At this moment, we can argue that India joined SCO firstly because its arch-rival Pakistan also joined, and secondly to keep close on China. In the intricate geopolitical environment it is recommended to keep your competitors under watch, and India is doing just that, being both a contender and an associate to China. So, the whole plan may backfire at the USA if this alliance (or some members) of Asian democracies at one point consider that the Chinese side is more profitable and instead of being a tool for containment against Beijing expansion, transforms into a real barrier for US interests in South-Eastern Asia. In presumptive geopolitics everything is possible and all is permitted.

Conclusions

The paper aimed to bring forward a possible geopolitical scenario of the years to come. This future US containment strategy is just a small piece in the giant puzzle of international relations at global scale. In the new millennium the battles between states and military blocks may not be conducted in the classical way. In fact, expanding Kennan's idea, the political and economic warfare could represent just another logical instance of Clausewitz's concept of war, in the absence

of a real armed conflict (Kennan, 1948). Still, the fact that China and the USA will be on an even greater competition for influence and power is almost a certainty. How this dispute will unfold is impossible to predict. One possibility is that the world will once again find its equilibrium in a bi-polar frame. If this is to be the case, than both China and the United States will try to gather strong allies and have under their influence as many countries and strategic assets as possible. Simultaneously, each one will make continuous efforts to destabilize the other side. Open war is a possibility, but it would weaken both countries for a long time, and, therefore, is undesirable as long as either of the two blocks does not have a decisive advantage. But there are other possibilities to hinder an opponent's movements.

One of these schemes presumes using the containment instruments in order to block any expansion beyond that which already exists. In a way, it is a kind of *status quo* imposed by one side on the enlargement of its opposite's dominion. So, the main idea for the US is to enforce a containment strategy on China's regional pre-eminence by using local allies. To some extent, it would be similar in principle with the one used during the Cold War, but with notable adaptation to the determinants of the day. And who else could be better candidates as allies than those states in Asia that are democracies - in order to have a common ideological root with the US and to be trustworthy, and at the same time those nations that somehow feel threatened by the rise of China. In this light, the plan to build an alliance of democracies (be it three or four founding members) seems worthwhile on paper. But there is a long way from thought to fact. The attempt in itself is not without chances of success, but for this to work it would require a very strong political will, both from the designed Quad countries and from the United States. Undoubtedly, there are virtual benefits for all parties involved. The Asian nations could better fend off Chinese claims both in economic and in regional security fields and this would also boost cooperation between them. For the US it would be a barrier against eventual Chinese grasp on the entire SE Asia and Pacific Area - act that would seriously affect US interests, and at the same time it would represent a strong moral ascendant over the main competitor.

The entire venture is dependent on cohesion, mutual trust and of course US backing. Without US support chances of success are slim at best, mainly because none of the Asian countries can challenge the Chinese by themselves, and not even together these states cannot match Beijing's economic and military power. That is why this whole construct is dependent on US involvement, directly or indirectly. But there is also the other part of the tale, meaning that these countries can, at one point, become China's allies against the US. It not likely, but it is not logically impossible, especially if the Chinese offer better deals and pecuniary incentives. In the end, for the US and its possible plan to encircle China, it is all about offer and counteroffer.

The importance of this analysis resides in the fact that whatever will happen, the effects of this action would not be limited only to the East Asia. Any friction between the two superpowers would directly impact the whole world. The entire global economy will suffer dire consequences in forms of shortages for common goods and fall on investment yields from an armed conflict or an economic and diplomatic Cold War between the US and China.

Unquestionably the study has its limits since it cannot cover all the aspects and cannot investigate deeper each of these directions. One possible development would require examining other ways to confine China, not just in SE Asia, but also in the opposite part, towards Siberia and Central Asia. Similarly, other points of view are needed to expand this groundwork, especially since Chinese government may try to do a similar movement in agreement with the EU and/or the Russian Federation in order to pinch the US on both its maritime flanks.

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#ECOINTEL – INTELLIGENCE AND NON-CLASSICAL THREATS – DETECTING AND PREVENTING BIOLOGICAL AND ECOLOGICAL THREATS TO SECURITY

COVID-19, THE EXTRA PANDEMIC RISK
HUMAN STRUCTURAL INNER CHANGES TRIGGERED BY THE COVID-19 PANDEMIC. THREATS TO NATIONAL AND INTERNATIONAL SECURITY

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Abstract:

What is there, beyond Covid-19? The modification of human being behaviours put in place to safeguard health has a hidden and subtle risk that can be exploited by individuals or States that want to take advantage from it, illicitly profiting from masses.

What is there behind the Covid-19? Not intended as a geopolitical movement but as "what does it cause and will cause to the next generations?" The latest scientific studies have disseminated what the beliefs on the human brain were. Neuroscience has proven that there are modifications that can be impressed in an extreme short time and in an unconscious manner. Structural modifications that lead to changes in the human being's way of thinking, reasoning and behaving.

The paper analyses for the first time how people subjected to modifications caused by the pandemic have been rendered fragile and dangerously vulnerable to external attacks.

Keywords: *surgical mask, Covid-19, brain, intelligence, pandemic, behaviour*.

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Introduction

This paper does not address the Covid-19 from a medical point of view. It exclusively focuses on the security and intelligence field. This paper does not intend to provide an evaluation of the necessary protective measures States have put in place to protect their citizens' health.

The Covid-19 virus pandemic has highlighted two particular situations that alert those dealing with National Security. These situations lead populations to be more subjective to mass manipulation in extremely reduced times and, in some cases, to an irreversible manipulation as well. Therefore, there must be a global and unified alert in order to manage and intervene in brief times. In the present paper, Covid-19 is not intended as a virus triggering a respiratory pathology, but as the set of modifications that the global situation (defined as pandemic) has brought into the life of the subjects, the behavioural and physiological modifications (people's attitudes, social behaviours and daily routines) as well as the relapses that these have had within and on the individuals, determining modifications that have occurred and sediment within the individuals, indistinctly hitting every subject (intelligence practitioners included), and thus determining effects and dangers that differ based on age, but not attributable to the virus *per se*.

There are fundamentally two factors that affect, in a different manner, the practitioner and the population that will be analysed in this paper: the usage of personal protective equipment utilised for the pandemic and an exponential growth of internet utilisation which is itself connected to external-environmental factors. Furthermore, it deepens the study of the internet environment (where the individual is physically located while browsing the internet and what the individual performs on the internet, intended as a "non-place place").

The paper addresses how the wide use of surgical masks decreases the cognitive capability of who wears it, thus diminishing cerebral and physiological responds of the human being. In the field of National Security there are two main risks that articulate. One is linked to the intelligence practitioners that will be (as well explained in the paper) less attentive, less reactive, less able to create connections

between events and people and, therefore, analysis and projections; along with a lesser muscular, cardiac and pulmonary response.

The second risk is linked to the population that, suffering what the single intelligence practitioner is suffering, will diminish its abilities to contrast possible manipulations put in place by States or entities that want to modify its thinking and, contextually, its freedom, rendering the population more easily manageable and less incline to discuss and counterstrike possible positions or ideas that are inoculated to them via non democratic and/or manipulative ways.

The paper will enables work on the construction of algorithms with new strategies with the purpose of avoiding attacks that might lead to degenerations of different kind and likewise operating inversely.

During this last period, Covid-19 has been keeping company to almost every population, by creating a series of decompensations, some of them already assessable, while others will only be visible in the future.

On the one side, there are the different behaviours of intelligence practitioners, on the other, there is the fragility shown by the internet and the management of everything that 'lives' in it. It is easy to 'breach' the internet and gather data. Internet has shown how using it for online lectures (with the current teaching methodologies) is not recommendable, how more rapidly and frequently attention decreases if new methods are not employed (Magris & Grassi, 2020), how staying connected on the computer for long hours brings on acute behavioural modifications for the human being, and, as all the latest studies conducted in Europe have shown, pathologies linked to depression in youth, who are forced to follow online lectures, have increased.

Covid-19, even when not physically infecting people, has acted against humans beyond its virological attack, by bringing some modifications into the subjects, into the masses and into the single intelligence practitioner. Situations that put at risk National Security since a changing into the masses in such a short time has never happened before. It becomes therefore indispensable being able to intervene in this physiological and behavioural changing of the masses.

This study is based on the research conducted, via computer systems, on what is currently academically acknowledged regarding the

pathologies indicated within this paper and the causes that lead to those pathologies. From the generic research, skimming has been conducted that led to synthetize a specific number of pathologies and disorders caused by the use of surgical masks for a long time, while excluding the assessment of the materials used in the making of masks and focusing the research on the specific physiological interactions linked to the diminishing of oxygen and increasing of carbon dioxide inhaled, due to the use of the sanitary device.

The analysis has been conducted by a team of psychiatrists, neuroscientists, psychologists, sociologists and intelligence experts correlating the various contributions in order to offer a multi-disciplinary and inter-disciplinary vision. The final evaluation also considered the direct observation of intelligence practitioners, from various Nations, since the beginning of the pandemic until October 1st 2020.

Covid-19 and its implications on the subjects

How does Covid-19 modify the physical, psychological and behavioural asset of any person? There are two main priorities by which it is possible to manage the subject's intellectual capabilities and, therefore, the single individual's behaviour, whether it is more or less gifted, through the utilisation of some rules. The sociological perspective will be subsequently analysed, i.e. the rules given by society that impose a behavioural dynamic on the subject.

It is important to start this paper not from what is behavioural dynamic but from what is physiological, from what those dealing with intelligence should know in order to manage situations, perform analyses and then impede attacks or manage manipulations.

A slight reduction of oxygen intake to the brain is sufficient to comprimise some functions. The surgical mask,[1] that everybody is

[1] In this paper the usage of the surgical mask, as is being described, must not be confused with the utilisation of doctors/physicians (or medical personnel) into the surgery room, which wear different types of surgical masks or personal protective equipment different than the ones used by common citizens; they wear them for a limited period of time compared to the generalised utilisation by the population, which uses the surgical mask for the entire day or for a wider period of time and for all their daily activities.

forced to wear during this long period defined as pandemic, begins to create disorders to the vigilance and behavioural response (Holey, Butcher, Nock & Mineka, 2017; Scharfetter, 2018) already after only 47 seconds of utilisation. These disorders become a physiological modification if the surgical mask is worn for several hours and over days (Grassi, 2020).

Vigilance lies at the basis of the memory as the brain, on the grounds of vigilance, decides into which memories it stores the information; and will consequently utilise what has been stored into the memory for the individual's behavioural purposes, intended as the way of responding to potential solicitations.

Specifically, the *obnubilation* phase manifests, with a slight decrease of the state of conscience along with sleepiness, difficulties of attention, concentration, perception, comprehension, elaboration, orientation and increasing of the attention stimuli threshold.

The behavioural response is subsequent to vigilance, therefore the lack of oxygen that is determined by the usage of the surgical mask begins to create problems and to compromise the vigilance. It is an impairment that, as before mentioned, becomes permanent if the utilisation of the surgical mask is protracted, even if in a non-continuous way during the 24 hours, but for at least 23 days.

A subject breathing less oxygen is a less vigilant subject and, primarily, with a different behavioural response, with a generalised and endocrine fragility. A subject that is thus more easily subjected to stress (the increase of cortisol is calculated with a 2 per cent increment), therefore less able of controlling him/herself.

It is highlighted that the increase of cortisol also leads to another state which is an increase of depression. Cortisol, defined as the stress hormone, is a chemical substance produced by the human body when under stress or facing a threat. Cortisol impairs the abilities of the prefrontal cortex of the brain, the area of the brain dedicated to reasoning, to planning complex cognitive behaviours, to asses which decision is best based on the available information, as well as to moderate social behaviour. Hence, the increasing of cortisol implies a decreased ability of the individual to conduct reasoned action adequate

to the present situation (Dedovic, Duchesne, Andrews, Engert & Pruessner, 2009; Stark et al., 2006).

Inherently to the lack of oxygenation to the brain, thus vigilance and behavioural response, it is referred to what in the medical field is defined as hypoxia[2] – the pathology that creates a series of clinical disorders, such as primarily asthma, which for the specific context of discussion – intelligence – has a relative interest but is significant if directed to the masses field. Yet, hypoxia creates a series of cerebral lesions. Since dealing with intelligence, it has to be considered that healthy individuals, in the light of the time for which they have been using the surgical mask, will become subjects with a clinical disease connected to severe hypoxia. For example, problems connected to memory, to listening skills and analysis, to vigilance are observed.

Hypoxia, mainly at a severe level, creates problems to the memory and to the calculation and analysis functions. The study carried put in 2014 demonstrates the way the state of cerebral alert – thus stimuli response – is extremely limited into the subjects having breathing limitation with impossibility circumscribed in time (Zani, Marsili, Rizzi, Senerchia & Proverbio, 2014).

Consequently, it emerges that the utilisation of the surgical mask, therefore the lack of oxygenation, implicates a modification of the medial anterior cingulate cortex and of the para-hippocampal gyrus in the left hemisphere of the brain. It is recalled that within the left hemisphere it is also situated the part which concerns the language, therefore, there will be an expression difficulty, a decrease of the utilisation to read, write and pronounce words and a lower possibility of memory acquisition of what is related to the verbal, written and para-verbal language.

[2] Some of the demonstrated causes of hypoxia are ageing, smoking, air/atmospheric pollution, stress, different diseases, obesity and the impediment of breathing the air in a natural way. Other causes are food pollution, water pollution, domestic pollution, sleep apneas, and utilization of heavy metals. Hypoxia symptoms are headache, fatigue, nausea, and shortness of breath, dysphoria, lightheadedness, euphoria, and hilarity, inability to coordinate the movements, dyspnea, cyanosis, tiredness, and sleepiness.

The cerebral cortex plays a key role in the control of the cognitive capabilities, sensory functions and movements. The medial anterior cingulate cortex plays a key role particularly in the memory, in learning, in language comprehension, in thought, attention and conscience (Bertossa & Ferrari, 2002; Balconi, 2006). It is also in charge of the visual-space orientation function, and therefore the subjects will be more susceptible to the environment's modifications generating states of anxiety and addictions. Hence the subject will easily have responses of addiction to everything that is proposed that trigger the emotion endocrine responses.

With regard to the medial cingulate cortex, this is connected to the foresight function and to conduct's outcome. Therefore, in the field of foresight it is very dangerous not to have alarm systems completely functional and thus to overestimate or underestimate the result/outcome of a conduct. It applies for the intelligence practitioner as well as for the offender that can find him/herself committing offensive actions.

Furthermore, the medial cingulate cortex is in charge with the elaboration of information of the decisions and is directly connected to the reward system (system that creates the positive or negative addictions, the lack of an alert system can ensure that a negative response can be considered as a positive one, such as the utilisation of alcohol and drugs with the aim of obtaining a result).

Here it denotes an effort and a distress for the subject that bring him/her, in order to survive, to not consider everything that is reported as a non-primary necessity. Recent scientific discoveries demonstrate that the human being's DNA is modifiable in a few hours, the modification becomes stable within 23 days following a precise cellular cycle or following a considerable stress suffered by the individual that can induce a DNA modification in a much shorter time.

Namely, the obscure DNA (Bertoli, 2018). Human DNA is divided into a 20 per cent, containing genes that are involved in the building of the proteins essential for life, and a remaining 80 per cent – namely obscure DNA – a "place" of an intense biochemical activity of the human genome that hosts billions of interrupters for the activation or the silencing of the genes. The life style constantly modifies and reviews the

super-structure of the body. The genetic expression is malleable, the brain reacts to every modification it is subjected to; therefore a normo-subject, or an intelligence practitioner has difficulty in managing his/her own brain. Applying the aforementioned from the individual to the masses, a series of other individual characteristics that modify people's behaviours must be also taken into consideration.

At this point an intelligence practitioner should evaluate: the lack of alarm stimuli of the masses and the modifications given, for example, by the design of the lie (DTL) (École Universitaire Internationale, 2019), where by design of the lie is intended how a place, i.e. the place the subject is situated, modifies his/her own behaviour. The environment, the decor of the environment, the people in the environment modify the state of the subject; it has been proven that a subject modifies his/her own posture, attitude and behaviour on the base of the people in front of him/her or of the place s/he is situated in (Gennaro & Scagliarini, 2014; Costa, 2016).

Even more, a subject does not realise s/he is manipulable into his/her own environment. Internet, therefore, becomes the best place in which to put in place conscious and unconscious manipulations. The subject's environment, i.e. what has inappropriately been named "comfort zone", is precisely the place where the cognitive capabilities of the subject can be undermined in a short period of time.

In the comfort zone, the subject has no barriers. Connected to what was stated above, it is extremely easy to understand how manipulable a mass is by utilizing appropriate language and images, and how criminality and the future generation of terrorists are extremely manipulable. A phone or a computer represent the comfort zone of the majority of people. The single individual becomes the mass and is under the same type of inference, which is amplified by the lack of oxygenation to the brain that will be analysed below.

Hypoxia effects on the masses

The lack of oxygenation caused by the surgical mask increases the difficulty to breathe and therefore physical fatigue under stress. Indeed, it increases the cognitive fatigue, modifies the mood tone,

modifies the determination of the objective, and modifies self-control; it becomes generalized hypoxia and progressively tissue hypoxia.

Generalized hypoxia refers to the lack of oxygen that concerns the entire body; by tissue hypoxia we refer to the lack of oxygen that concerns some regions of the organism. Hypoxia realizes acidosis, hence the releasing of transition metals such as iron and copper, and become hydro-peroxide and thus free radicals circulate; these radicals exert a direct damaging action at the extra-cellular level and create an oxidative stress problem, and therefore a different type of emergent risk factor for the health. This factor must be evaluated from the perspective of the health care costs that a State must sustain in order to treat its own population.

Basically, hypoxia always leads to premature aging and, according to World Health Organization (WHO) data, at least to 100 pathologies among which arteriosclerosis and cancer (Bonsignore, Marrone & Morici, 2011). Hypoxia is early recognisable by the pallor and by the confusion and tiredness that those wearing surgical masks have already felt even after half hour of wearing it, without realising it except at the end of the day. This is due to the annulment of the vigilance systems.

One feels slightly inebriated, almost drunk, but at the basis, there is the reduction of perceptive capacity, thus the Central Nervous System applies an automatic rule of not triggering the alarm. An extremely dangerous factor that makes the individual to push over the security levels, creating irreversible damages. Hypoxia can also lead to death. The lack of the alert systems leads the individual to committing also dangerous or illogical actions with no inhibitions.

During the initial phase, this lack of oxygenation interests the nervous tissues, most of all the brain and the hearing and visual apparatus compromising their functionalities. Compromising is then added to the already scientifically demonstrated limits of the subject's hearing and visual apparatus in normal conditions. Once again, the hearing and visual apparatus must be safeguarded with the aim to prevent the subject from being manipulated.

Indeed, under normal conditions, the human being ear perception is around 65/70 per cent, that is only the 65/70 per cent of

what we hear matches reality. And it must be taken into account that a human being is aware of only the 7 per cent of the communication s/he receives, 7 per cent of that already diminished perception above mentioned. The rest is the result of the elaboration of the brain that, however, is based on its own elaboration and interpretations based on the information the individual has already stored in memory, therefore what the individual hears does not match reality but is rather a personal interpretation of reality. Taking into consideration the sight, the real perception of what any individual sees is assessed at 45 per cent, and still, only the 7 per cent of that 45 per cent corresponds to reality (Siegel, 2013).

In an already existent fragility of the human being, the interference that hypoxia creates and the states of the design where the subject finds him/herself operating, lead to a significant variation of the perception of the truth and of the 'here and now' status, perception of the self and thus, consequently, a wrong memorization of what is perceived. A low intake of oxygen to the brain provokes a mistaken perception of the colours, a sight restriction and a loss of the central vision.

The main issue is that the subject, with a lack of oxygen, is unable to know the symptoms if s/he does not recognize them. Therefore s/he tends to perceive the air that is breathing, even if it has a lower level of oxygen as the air with the optimal oxygen level. One of the causes of hypoxia is alveolar hypo-ventilation. Therefore, an air that arrives full of oxygen to the alveolus. Likewise, indeed, it is an air that arrives full of carbon dioxide and limited of oxygen, due to the nose-mouth respiration that is limited by the surgical mask (LaMotte, 2020).

After at least 8 days of utilisation of devices that impede normal breathing for at least 4 hours per day various symptoms emerge: evaluation errors, loss of self-criticism, dizziness, slow thinking, depression, tachypnoea, muscle spasms, convulsions, tremors at the extremities, decreased muscle strength, loss of consciousness. For each listed symptom the symptomatology can be either individual or plural.

Considering all the above, Covid-19 has generated a series of subjects that can easily be manipulated at individual or masses level. On the operational level, the terrorist or the economic crime offender can

be handled by modifying or reasoning on the parameters of the subject. Contextually, work must be done in order to impede a vulnerability of the intelligence practitioner that will have to face, unknowingly, the same issues faced by any other individual subjected to the continuous utilisation of the surgical mask.

Learning, use of Internet and design of the lie

Learning is experiential, thus the result of experiences. The massive usage of internet from the individuals leads all individuals to the same experiences since Internet forms induced experiences which, therefore, homologates all individuals rendering them all identical.

Among the typologies of learning there is a particular kind of learning, the insight learning (Kohler, 1969). It is a typology of learning that is based on intuition, which involves a rupture and consequently a restructuration of the cognitive process. The insight is the set of elaborations given by experience, hence the elaborating memory of the individual which is based on the capabilities that the cingulate cortex allows to structure. At this point, the limited possibility of memory and the limited thought structuring, as above described, impede the individual from having a global complete vision hence a completed foresight elaboration of the "here and now". Consequently, there will be a delay in the managing of the occurring (or contingent) situation and an erroneous reading, analysis and foresight of the future.

With insight learning, the organism reaches the objective through a cognitive restructuration of the environment. Insight learning is not a type of associative learning but takes place following a restructuration of the elements of the visual and phonetic field. What modifies the human being is the place in which s/he is in, true or verisimilar (context and scenario design (Bellomo, 2011) that contextualised becomes "the context modifies the individual's self") (Bellomo, 2015).

The non-place place, in this specific case the Internet, modifies the individuals' perception. Therefore, the subject's state is modifiable with the utilisation of words/sounds/images or by activating the sounds and images' frequencies that activate when the subject reads

certain words or images (due to hypoxia individuals will be more inclined to mentally read certain sounds, certain words, certain images and to exclude others). In this case, reading (images or words) is considered as thought restructuring. It is understandable that the concept of design of the lie is based on the existing inference among places, objects, people and images, on how the individual modifies his/her behaviour and his/her way of being based on the places s/he enters in, and/or is immersed in, and based on his/her mnemonic knowledge.

It appears obvious how social media can be used as containers of a design of the lie that self-enforces and is being imposed on the subject who loses the capability to re-elaborate. A continuous and pervasive process that destructs culture, destructs human being's intelligence and his/her elaboration capability, since the subjects develop a unidirectional intelligence that loses capability of association and of response to external stimuli with a subsequent decrease of the subject's intellective capabilities. The design is built. Where the environment can be natural, the design is the product of human elaboration.

Within the place-design s/he comes in, the subject loses his/her capability of responding and elaborating external stimuli and of putting them into relation with each other. A phenomenon that constantly increases, that had reached its apex during the lockdown and the restrictions that all have endured during the Covid-19 period that forced the subjects within confined places and forced them all to enter into the design-internet in order to communicate with each other, to work, to attend lessons.

The utilisation of online communication and interaction has, indeed, effects on every individual's brain (included the brain of the intelligence practitioner). The subject's brain, when responding to the "on-line stimuli" does not memorise as if it was physically present within an environment where it can interact with the others and with the environment itself. During on-line interaction and on-line learning (massively used around the world during the last 6 months) different parts of the brain are activated (i.e. T6, F1, F3) which are not involved with the frontal learning and that lead to the dispersion of attention and dispersion of information received by the subject (Magris & Grassi, 2020).

Internet is not the screen the user looks at but what s/he looks at inside the screen, what s/he sees. It is the deviated awareness one has. The awareness level that is modified. The non-response to the stimuli and an excessive response to a mental image that the user self-creates is not due to what s/he really sees, because Internet is not what one reads, one sees, but it is the stimulus the brain elaborates based on the inferences that make individuals freely obligated by their brains which impose them solutions based on what their knowledge, their nationalities, their biases are.

The Internet world is based on verisimilitude, not truth, on images read by the subject based on his/her individual predispositions. Tests carried out showing photos of faces, to subjects undergoing the test, have shown how every single individual could see a different emotional state compared to those seen by another individual to whom was shown the same picture. Something that occurs in a significantly inferior manner if the same test is administered in presence, and even inferiorly if to the subjects were physically shown the face of the person object of the analysis[3].

Indeed, three different brain elaboration states that show how the brain interprets based on the place and the situation that is being created as framework of the fact, within the design of the context. It clearly emerges how the current situation that the human being lives is a condition deprived of physicality. We do not have places any more, we have Internet. The Internet has become the place of interaction, of opinion exchange, of education, of information gathering, of work.

However, the influences the internet-design exerts on the individual are not the same the physical environment would exert on the individual. The individual grows, since the very beginning, always in relation with the environment, from the moment s/he is conceived s/he

[3] Controlled Oral Word Association Test - COWA (Benton and Hamsher, 1976, 1989; Spreen e Strauss 1991); Digit Span (Wechsler, 1945, 1955, 1981, 1987); Frontal Assessment Battery (FAB) (Dubois et al., 2000); Iowa Gambling Test (IGT) Bechara et al., 1994; Rey-Osterrieth Complex Figure Test (ROCFT) (Osterrieth, 1944; Bertolani et al., 1993, Caffarra et al., 2002); XXI Congresso Nazionale AIP della Sezione di Psicologia Sperimentale, Dipartimento di Psicologia e Scienze Cognitive Università degli Studi di Trento, 2015.

grows in relations to the environment, responding to the stimuli it proposes to him/her. However, the stimuli the Internet design send to the individual are perceived and stored within the memory differently by the subject, causing modifications on his/her behaviour and structural modifications in his/her brain. Hence, the individual behaviour is no more the result of mental associations, of an interactive-cognitive process (based on what the individual has learnt), but is the result of a moment, like that insight that in reality does not develop within the individual as the elaboration and restructuration of the information and knowledge in his/her possession, but rather as a direct result of a stimulus given by the Internet design. Product of a restructuration no longer intended as action of the individual on the external environment but rather as action of the Internet design on the individual's brain.

Risks and emerging threats

The hypoxia, decreasing the alert responses of the Central Nervous System, leaves the brain and consequently the individual with no barrier in front of external stimuli and eventual manipulations that the brain is not able to filter, under such conditions. On the one hand, this works as if opening a dam since the brain, when receiving the signals from the extern does not filter them any more on the basis of the value and importance schemes usually used by the brain (hypoxia and micro-hypoxia condition does not permit it to), it remains barren and, in a way, more free to receive signals, precisely because it is not able to filter them anymore on the basis of schemes stored in the memory (which can be biased).

The brain allows all the external stimuli and communications to enter without the capability of giving them the right value and contextually "choosing how and if" to store them. On the other hand, in this "openness" situation of the brain, it is easier to activate manipulation and to give the brain those parameters and evaluation schemes that it is not able to adopt by itself and therefore adopts the ones given by the exterior. It adopts the design that is being proposed from the outside, in this case, indeed, a design of the lie. Now the

manipulation can take place in a more rapid and subtle way without the subject being aware of this.

The same condition occurs with the constant utilisation of the Internet - in the current context - flawed by the physio-sociological limitations "imposed" by the aforementioned pandemic period. In the moment in which s/he is connected to the Internet, the subject becomes less able to process the physical environment stimuli s/he is immersed, the environment s/he lives is the internet design. This way, once again, the subject - his/her brain - remains deprived of a filtration system of the stimuli s/he receives, keeping open a direct channel letting in the stimuli coming from the Internet environment. In this way the design proposed by the Internet environment manipulates the subject by offering him/her evaluation cognitive schemes that will sediment into the subject and through which the subject will evaluate and interpret the reality.

A specific situation, that needs a specific analysis, is connected to the present minors whose learning system has been modified and upon whom a series of reinforcement and recall signals have been involuntary inserted, that can be used against them, even when they will become adults – without them being aware of it.

It should be noted that the physiological and behavioural modification induced by the period of extreme stress (that is identified as Covid-19 period) together with the forced closure within closed locations and the type of communication that minors have been subjected to, along with the utilisation of surgical masks. A condition lived by the kids that are now living their period of major receptivity towards environment stimuli (0-6 years old) (Castelli, 2014; Magris, Grassi & Di Gioia, 2019).

Minors (0-16 years old) that have lived and are living under such conditions have developed an *access key* (due to these modifications that the external conditions determine within an individual, as before mentioned). An access key that has been individuated by École Universitaire Internationale research centre – though the institute considers best not to specify it in this context in order to protect National Security activities as it is not specifically linked to this specific discussion.

The set of external conditions and their echo within the individual have determined modifications that have been registered into their brain determining (considering the prolongation of this period) a modification that will last for a long time. It is this modification, registered within the brain, that will not only contribute to shape the future development of all minors that have lived this situation (with differences from nations to nations, based on the specific measures adopted by the reference States), but that could also be exploited by external agents as a "shortcut" in order to manipulate these individuals' brain. Indeed, an external agent can know the condition the subjects have lived (given that the global situation is public) and how this can be exploited to steer the subjects' thoughts and manipulate the subjects' behaviours today and later on, when minors become adults and the pandemic ends.

Flaws that refer to: the risk of a major difficulty in having a real vision of facts, a synaptic difficulty in connecting situations that thus imply a series of errors in predictions, technical-tactical errors in the management of operations, higher emotional fragility within the population and intelligence practitioners, higher predisposition to mental manipulation, greater diffusion of psychological and physical pathologies with a consequent increase of costs for the health systems, decrease of personnel deemed able to conduct tasks linked to security, greater vulnerability for democracies due to the easiest possibility of infiltration and subversion.

Global and European data already show the psychological stress and mental pathologies that the conditions imposed on the population by the pandemic have worsen and damaged the mental state of the entire population in both adults and minors. A multi-country research conducted in Spain, the United Kingdom, Germany, France, Poland and Italy on the effect of the pandemic on the population (referring to mental health and psychological distress) shows that there has been in an increment from 50 per cent to 69 per cent of psychological disorders among European citizens. Already during the first part of the pandemic, the conditions lived by the citizens have led to an increase in cases of depression and major depression, anxiety disorder, along with an increment of suicide and suicide attempt among the population

especially among youth (among which has been registered an increase of suicide and suicide attempts). Furthermore, the condition imposed by the pandemic has led to a great increase in the consumption of psychotropic medications (Casagrande, Favieri, Tambelli & Forte, 2020; Delmastro & Zamariola, 2020; Elma Research, 2020; Holmes et al., 2020; Mazza et al., 2020; Bambin Gesù Hospital, 2021).

The Diagnostic and Statistical Manual of Mental Disorder (DMS-5) states that a window of six months is needed in order to diagnose depression and at least 12 months to recover from it. Taking this into account, along with the constant medical alert during the pandemic, it can be said the warning following the end of the pandemic will last for at least 24 months after the pandemic. The populations that are suffering the above-mentioned conditions and distress live a condition that prevent them from making calculated decisions and create the humus for the growing of various type of crimes among which riots and terroristic attacks; at the same time it lives the masses more subjected to be manipulated by external entities.

In light of what is above mentioned, it is deduced that both the current situation and the short, long and very long term future present flaws in every National and International Security scenarios if actions, aimed at repairing the situation, are not taken. Actions, aimed at managing the situation that provide solutions that apply neuropsychological techniques such the *Psych-evolving techniques* (Magris, Di Gioia, Lamonato, Mihalache & Bellomo, 2020).

Conclusions

The sum of the situations defined in this paper, that people have unwillingly lived and are still living, has determined and will determine even more a particularly dangerous situation in terms of National and International Security.

On the one hand, we must take into consideration the problems induced in the population by the utilisation of surgical masks (and the implications at the physical level that this involves), and due to the behavioural and physiological modifications that determine an increased possibility of manipulation of the population. Manipulations

and behavioural modifications that, as defined in this paper, are not only a characteristic of the present moment, but that have determined structural modifications not only among the adult population and current practitioners, but also among minors. Thus, opening current and future scenarios of manipulation for the single individual and for the masses that can be put in place in an extremely short time.

On the other hand, we must take into account that intelligence practitioners, as every other individual, have been subjected to similar influences and behavioural regimes imposed during this pandemic period.

Taking into account the fact that every human being behaves in a unique manner according to behavioural schemes that s/he tend to repeat over time (Siracusano, Sarchiola & Miolu, 2008), problems are determined or might be determine into the subject, of which the intelligence practitioner is not aware, and that will directly impact the practitioner and the results of his/her work.

Present situation issues can be detected at the level of micro (individual) and macro (population) system, issues that have to be faced simultaneously in order to be able to elaborate counter-actions in order to stem and reduce the emergent threats.

Counter-actions such as the creation of algorithms that take into consideration the hours in which the intelligence practitioner uses the surgical mask, characteristics linked to sex, age, weight and life style, pathologies, type of activities, diet and other information, in order to have a chart (that can be modify at all times) regarding the maximum daily time in which the practitioner should wear a mask. Yet, an algorithm that can be created always starting from the evaluation, in this case macro-systemic, of a State's population, aimed to have data that indicates the reaching of the crashing point of the considered macro-system. This, in order to put in place systems that can prevent the population from being an easy target of manipulation, for instance putting in practice specific high penetration informative campaigns.

Moreover, it needs to be considered that the surgical mask must be used and not over-used, masks should be made of specific materials (UNICEF, 2020; World Health Organization, 2020). It is useful for the population to be able to go outside, in the sunlight, without wearing a

surgical mask for a part of the day, and aerate the place where they live or work letting the air in from outside rather than using air filters. These behaviours enable to slow down dysfunctions or pathologies that may arise within the population and intelligence practitioners.

Taking into consideration that the Covid-19 pandemic has arrived unexpectedly (without the possibility for States and people to prepare for it), what has been addressed in this paper describes the effects that the necessary measures aimed at safeguarding people's health have inevitably caused within the citizens, within the individuals that had (and have) to wear protective devices/equipment. At this stage, as there has not been the possibility to fight or to early respond to the virus threat, what can be done is to early analyse every consequences that some mandatory acts have entailed, and be ready and repair beforehand what can become damages on the long run and long-term threats.

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GAMES, EXERCISES AND SIMULATIONS

LEVERAGING STRUCTURED ANALYTIC TECHNIQUES TO RECOGNIZE PERSONAL AND GLOBAL HEALTH CRISES

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Abstract:
The US medical system suffers from serious structural flaws that make it hard for patients to get a proper diagnosis. Currently, doctors are highly incentivized to order tests and initiate treatments and often fail to take the time needed to diagnose a problem. If doctors had more time to engage with their patients and apply critical thinking techniques, both parties would reach a more satisfactory outcome. Moreover, incorporating Structured Analytic Techniques into the practice of medicine writ large would benefit the global community as recognition of—and reaction to—looming health security crises. Structured Analytic Techniques help doctors recognize lead indicators of an emerging health security crisis and overcome well-entrenched mental mindsets. The techniques provide a ready „tool kit" for doctors practicing the emerging discipline of health security intelligence[1].

Keywords: *Public Health, Health Security Intelligence, Diagnosis, Structured Analytic Techniques.*

Introduction

In the American medical system, most physicians are under pressure on many fronts—temporal, financial, and legal—to start treating an illness instead of taking time up front to diagnose it. For most doctors, the default usually is to first test and treat—often skipping over any serious effort to diagnose the problem. Doctors

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[1] Most of the information in this article is based on experiences of the author – a career intelligence analyst – who visited 17 specialists, received countless treatments, and failed to get a diagnosis of his condition for over five years. The article is derived largely from a chapter in the book, *How to Get the Right Diagnosis: 16 Tips for Navigating the Medical System*, 2021.

instead prescribe a series of medications or treatments in the hope one of them will cure the patient. If these treatments fail, the individual may experience a worsening of their condition or die without ever receiving a true diagnosis or the right treatment.

In most cases, this strategy is successful because, as many doctors attest:

- In a high percentage of cases, the human body will eventually cure itself. On the first visit to a doctor, a treatment is usually prescribed, but at best it may only be expediting the recovery process.
- Most illnesses can be treated successfully with just one or two treatments.

Doctors are under extreme pressure from the insurance industry to make decisions as quickly as possible to keep costs to a minimum. Generating a workable and accountable metric to validate the time a doctor would take to sit down, research, and diagnose what is causing a patient's problem is a difficult problem. If doctors had more time, however, to engage their patients and partner with them in applying Structured Analytic Techniques (SATs) in seeking a diagnosis, both parties would reach a much more satisfactory outcome.

For patients with complicated or hard-to-diagnose medical problems, the disincentive to diagnose can have major negative consequences—and even lead to the patient's death. According to a report issued in 2015 by the Institute of Medicine, an arm of the National Academy of Sciences, as many as 12 million Americans may be receiving erroneous or late diagnoses every year (Balogh, 2015). This is far more than the estimated 100,000 deaths per year attributed to errors in hospital treatment.

Moreover, the error rate for diagnosing illnesses is likely to worsen as the diagnostic process and health-care delivery become more complex.

This article presents a testable hypothesis that as many as 95 percent—or two standard deviations—of people who experience medical problems will recover because they self-heal or, after receiving two or three common treatments, the problem is cured. The remaining

5 percent of the population, however, may have more complicated issues, requiring a more thorough diagnosis.[2]

What should people do if their condition is not easily diagnosed? Given the strong financial incentives to treat and not diagnose, many individuals who have unusual and hard-to-diagnose conditions become frustrated by the failure to get a proper diagnosis. Few tools or techniques are available to address the problems encountered by undiagnosed or misdiagnosed patients. The thesis of this article is that many people in this group would have been better served if they had 1) used structured techniques to help them navigate the medical care system and 2) actively engaged their doctor as a partner in seeking a diagnosis of their problem. Anecdotal evidence suggests that those who have succeeded in getting a diagnosis and effective treatment usually had to take direct responsibility for managing their own health care. By proactively engaging with their doctors, they could manage their care more effectively.

For example, techniques such as questioning one's assumptions can play a critical role in helping doctors recognize anomalies and overcome well-entrenched mindsets, allowing them to respond quickly to an emerging health crisis or pandemic. Often the indicators of a potential outbreak of an infectious disease are ambiguous. If recognized early on, however, a major public health crisis can be avoided, or the damage minimized. (Wilson, 2016; Wilson, 2018)

Six Structured Analytic Techniques (SATs) are reviewed in this article that doctors and patients can use to challenge entrenched mindsets and focus more attention on the need to begin treatment of a patient's problem by first seeking the correct diagnosis (Pherson and Heuer, 2011). Examples are given showing how these SATs were used correctly in treating patients as well as when they were not applied—resulting in serious negative consequences. The article describes when the techniques are most useful and what cognitive biases they help to correct. The techniques are also useful in helping doctors and nurses recognize, and quickly react to, emerging threats to global health security. In the Appendix, readers will find step-by- step instructions

[2] This thesis is offered as a hypothesis to be validated or disproved by those much more proficient in medical research than the author.

for applying the techniques. By integrating these techniques into the emerging discipline of health security intelligence, the recognition of – and reaction to – public health threats will be greatly advanced.

Structured analytic techniques: new arrows for the doctor's quiver

SATs were developed in the late 1990s to provide more rigorous, transparent, and collaborative methods for analysing a problem, resolving differences, innovating solutions, and anticipating the future. The techniques have proven highly effective in supporting the analytic process in the intelligence community as well as in the corporate world (Pherson and Heuer, 2021; George and Bruce, 2014)[3]. They are a subset of a variety of practices in the intelligence community that can – and have been – adapted to the medical profession to reduce errors and improve the quality of health care (see Figure 1).

[3] A description of the origins of Structured Analytic Techniques and their role in the analytic process can be found in Pherson and Heuer as well as George and Bruce.

The following key practices or concepts in intelligence analysis have the potential to help medical professionals reduce error rates:

- Recognize how mental mindsets and past *experiences* can bias a diagnosis (Cognitive Bias and Intuitive Traps)
- Develop more than one explanation for an illness during the initial diagnosis (Multiple Hypothesis Generation)
- Challenge preconceived notions generated by a patient's appearance, age, or race (Key Assumptions Check)
- Focus on disconfirming evidence to quickly eliminate incorrect diagnoses (Analysis of Competing Hypotheses)
- Seek out and value the opinions of others working the case (Coordination and Peer Review)
- Know when to expect deception (Deception Detection)

Figure 1: Intelligence tradecraft for Medicine (Source: Pherson and Heuer, 2021)

SATs came into prominence following the terrorist attacks on 11 September 2001 and the flawed 2002 National Intelligence Estimate on weapons of mass destruction in Iraq as a way to improve the overall quality of analysis in the U.S. Intelligence Community. Over the years, use of the techniques has spread to other parts of the U.S. government, foreign intelligence services, major corporations, and academia. The techniques have universal value and utility. Analysis of Competing Hypotheses (ACH), for example, is similar to differential diagnosis in the medical profession.

SATs can be leveraged to gain more knowledge about a person's condition while helping the doctor make a correct diagnosis. The six most effective techniques for prompting a doctor to diagnose a problem or challenge an entrenched mental mindset are:

(1) Multiple Hypothesis Generation
(2) Analysis of Competing Hypotheses
(3) Indicators
(4) Key Assumptions Check
(5) Premortem Analysis
(6) Structured Self-Critique

Step-by-step instructions on how to use these techniques are provided at the end of this article. Additional information on when to use them, the value added, their relationship to other techniques, and potential pitfalls to avoid can be found in *Structured Analytic Techniques for Intelligence Analysis* (Pherson and Heuer, 2021).

Multiple hypotheses generation: establishing a range of explanations

In *How Doctors Think*, Dr. Jerome Groopman argues that the practice of considering alternative explanations for a medical problem is one of the strongest safeguards against making cognitive errors (Groopman, 2007, p. 66). He quotes one of his colleagues as saying, „I learned to always hold back [and avoid jumping to a conclusion], to make sure that, even when I think I have the answer, to generate a short list of alternatives."

Multiple Hypothesis Generation is a technique for generating multiple alternatives for explaining a particular issue, activity, or

behaviour. It is a key technique in the analyst's toolkit and is particularly useful when many factors are involved, a high degree of uncertainty exists regarding the diagnosis, and doctors and/or nurses hold different views.

The technique helps patients, patients' families, and their doctors avoid – or at least mitigate the power of – several analytic traps, including:

- Coming to premature closure.
- Being overly influenced by first impressions.
- Seizing on the first diagnosis or procedure that looks „good enough".
- Focusing on too narrow a range of alternatives.
- Selecting an explanation that replicates a past success or avoids a previous error.

The importance of first considering multiple diagnoses can be demonstrated with the case of dementia. Dementia can be caused by a wide variety of illnesses, injuries, or other factors. Narrowing down the type of dementia is critical to successful treatment. Individuals with Parkinson's disease, for example, may have symptoms similar to other types of dementia, but the treatment could be vastly different. The symptoms of dementia can be hard to assign to a specific type.

Failing to identify the type of dementia can result in paradoxical or unanticipated reactions to a medication or treatment. For example, individuals with a certain type of dementia called Lewy-Body typically have a paradoxical reaction to benzodiazepine medications such as Valium. When an agitated patient with Lewy-Body dementia is prescribed a benzodiazepine medication (which is a typical first-line medication for agitated behaviour), instead of calming the patient, the effect is to increase the level of agitation. For these reasons, an attentive doctor should first consider a range of possible forms of dementia and then narrow down the diagnosis to avoid prescribing an incorrect treatment.

The value of seeking multiple explanations for a medical condition is illustrated by the story of a patient with persistent back pain just below the shoulder blades. The patient rejected her doctor's initial advice to start taking a strong pain reliever because she first

wanted to find the root cause of the problem. When a review of the patient's activities revealed no clues and blood tests yielded no useful insights, the doctor suggested the pain might be stomach related. The patient went to a gastroenterologist, who grudgingly ordered a CT scan, "only because my family had a history of pancreatic cancer". The CT scan, however, provided no clues. The gastroenterologist then suggested the problem could be orthopaedic, but an orthopaedic surgeon examined her back and found nothing wrong.

Next an MRI with contrast was ordered; the results revealed no back issues but did reveal a small cyst on the pancreas. An endoscopic procedure was ordered to image the pancreas and take a biopsy. The endoscopy revealed a small and benign cyst in the pancreas. The doctor said nothing could be done to make it go away and that he wanted to perform another endoscopy in two years. The doctor told the patient there was nothing she could do to get rid of the cyst, but he wanted her to check back in two years.

The patient did some research, decided to eliminate as much sugar as possible from her diet, and the ache eventually disappeared. Two years passed, and the cyst was smaller. After four years, the patient was told the doctor wanted to discontinue testing because the situation was sufficiently stable.

In some intelligence services, analysts are not allowed to present their conclusions unless they can demonstrate that they have considered alternative explanations for what has occurred or is about to occur. This approach is important during diagnosis of a health issue because the simple process of considering alternative explanations forces patients and their doctors to focus on all the available data, not just the information or the tests that are consistent with the lead diagnosis.

A knowledgeable patient will press a doctor to provide a list of possible alternative explanations for his or her condition. A good question often asked is: Who else has the doctor examined who exhibited the same symptoms, and what kinds of things turned out to be wrong with them?

Ideally, the diagnostic process should start with a brainstorming session involving the patient and the doctor. The objective would be to

generate a list of all possible explanations for the patient's condition. The discussion would cover such questions as: "What is the most common cause of what the patient is experiencing, and what the most serious cause is?" (Nudson, 2019) In real life, this rarely happens because 1) doctors are too pressed for time, 2) the most obvious treatment is usually the right treatment, and 3) pricing structures in medicine prohibit running all potential hypotheses to ground. If a patient has grown tired of the standard testing procedures, he or she should show the doctor previous test results and challenge him or her to come up with some nonstandard alternatives.

Recommended procedures for patients include:

- Listening carefully for information that might suggest a medical history that is not "normal".
- Resisting the temptation to come to premature closure.
- Making a list of multiple possible explanations at the start of the diagnosis.

Analysis of competing hypotheses: identifying data that is inconsistent with the diagnosis

On the television program *House*, the lead doctor would frequently gather his medical team around a whiteboard, list the potential diagnoses across the top of the board, list the relevant test results and other information down the left side, and then check off which data was consistent—or inconsistent— with each diagnosis. The doctor would then order appropriate tests that would allow the team to dismiss candidate diagnoses until only the correct diagnosis was left standing.

Dr. House generates potential diagnoses, analyses symptoms and test results, and makes a diagnosis based on the evidentiary contradictions to the hypothesis. This technique is similar to a method many intelligence analysts use called Analysis of Competing Hypotheses (ACH). ACH involves generating a complete set of hypotheses (or potential diagnoses), the systematic evaluation of each based on the available evidence (or symptoms and test results), and the selection of the hypothesis (or diagnosis) that best explains the condition because little evidence can be found to refute it. In essence, the technique

focuses attention to which explanations – or diagnoses – can be dismissed because of compelling inconsistent evidence, leaving the "last man standing" as the most likely explanation.

A similar process used in the medical profession is called differential diagnosis. A differential diagnostic procedure is a systematic process used to narrow down the probabilities of a candidate illness to negligible levels, by using evidence such as symptoms, patient history, and medical knowledge. A standard differential diagnosis has four steps (*Sharecare*, 2019). The physician:

(1) Gathers all information about the patient, focusing on the symptoms.

(2) Lists all the possible causes for the symptoms.

(3) Prioritizes the list by placing the most dangerous possible causes at the top of the list.

(4) Rules out or treats possible causes, beginning with the most dangerous condition and then working down the list. The physician removes diagnoses from the list by observing and applying tests that produce different results, depending on which diagnosis is correct.

If no diagnosis remains, then either the physician made an error, possibly by failing originally to list a potential cause or the condition is undocumented.

The value of looking for inconsistent evidence is illustrated by the story of a female athlete who played point guard on the basketball team but was having trouble with her breathing, especially when the team was under a lot of pressure. She also was on the swim team, where some of her friends were having the same problem during workouts. Their doctors gave those inhalers, believing they were suffering from exercise-induced asthma.

When the patient went to see her paediatrician, he asked her to run up and down the seven flights of stairs in his building and report if that exercise made it difficult for her to breathe. She did and reported no problems. The doctor said that running up and down the stairs with no problem was inconsistent with a diagnosis of exercise-induced asthma. He believed the more likely explanation was performance stress that constricted the vocal cords, narrowed the throat, and made

it hard to breathe. He recommended some visualization exercises that the patient tried and was fine.

The ACH technique—or its twin in medical practice, differential diagnosis—works best when there is a robust flow of data and multiple test results to absorb and evaluate. It helps the patient and the doctors overcome several mistakes, including:

- Accepting information that confirms one's preconceptions or contradicts prior beliefs.
- Being overly influenced by first impressions based on incomplete data.
- Ignoring or discounting information that does not "fit" the lead diagnosis.
- Failing to generate a full set of explanations at the outset.
- Relying on evidence that tends to confirm one's favoured diagnosis but is also consistent with other possibilities and therefore has no diagnostic value.

Simultaneous evaluation of competing diagnoses is challenging to do. To retain five or seven potential diagnoses in working memory and process how each item of information fits with each diagnosis is extremely difficult. ACH overcomes these obstacles by making it easier to enter, sort, and evaluate the data by working through a matrix one cell at a time (see Figure 2).

Patient	Lead Diagnosis	Alternative Diagnosis 1	Alternative Diagnosis 2	Alternative Diagnosis 3
Inconsistency *Score*→→				
Symptom 1				
Symptom 2				
Symptom 3				
Test Result 1				
Test Result 2				
Assumption 1				
Information Gap 1				
Other Information 1				

Legend:
II - Very Inconsistent
I - Inconsistent
N - Neutral
NA - Not Applicable
C - Consistent
CC - Very Consistent

Figure 2: ACH Sample Matrix (Source: the author)

Use of an ACH matrix also ensures that all the members of the medical team are working from "the same sheet of music" with shared information, arguments, and assumptions. It helps them gain a better understanding of why there are differences of opinion, and it helps depersonalize an argument when serious differences of opinion are present.

A downside in using the technique is when the range of diagnoses considered is not comprehensive. Doctors, however, must

take care not to offer opinions or diagnoses that deal with issues that fall outside their specialties. Doctors, for example, could unduly alarm a patient by suggesting that one of many potential causes of their discomfort may be some form of cancer. This problem could be mitigated by limiting the number of alternatives to the two or three most viable diagnoses, or by stating that cancer is unlikely but impossible to totally rule out in most cases.

Indicators: tracking the progress of treatment

Indicators are observable phenomena that are periodically reviewed to help establish which explanations are most viable. Sets of indicators can be paired with each potential explanation to track over time which diagnosis is emerging as the most likely explanation for the medical condition. By establishing a set of objective criteria, doctors and nurses can track whether subsequent developments are reinforcing or undermining the various diagnoses.

Indicators provide an analytic baseline for instilling more rigors into the process and enhancing the credibility of the final diagnosis. They can be used to validate the lead diagnosis or alert one to unexpected developments that may focus attention on a less likely diagnosis. Indicators can also play a critical role in helping doctors and nurses to spot anomalies and nascent threats that could spark a major health security crisis.

The use of indicators can help the medical team overcome—or at least mitigate—several cognitive biases and intuitive traps, including:

- Continuing to hold to a judgment when confronted with a mounting list of evidence that contradicts the initial diagnosis.
- Basing a diagnosis on weak evidence or evidence that easily comes to mind.
- Accepting or rejecting someone else's ideas because the doctor or nurse likes or dislikes everything about that person.
- Claiming the key items of information, that turned out to be dispositive in making the diagnosis, were easy to identify at the start.

When creating a list of indicators, five rules of thumb apply. Indicators should be:

(1) Observable and collectible, ensuring that the observations are available to the diagnosing medical team.

(2) Valid, in that they accurately measure or reflect what is being reported.

(3) Reliable, in that they will be reported in the same way by different people.

(4) Stable, in that they can be used over time to allow comparable assessments.

(5) Unique, in that they point to only one diagnosis. This last condition is often the most difficult to achieve.

If someone is having difficulty running for a long period of time, for example, a good strategy would be for the doctor to say, "We are giving you an asthma medication. We expect it to have the following effect: it should increase how long you can run without having to stop immediately after you use it by *X*; it should add a set number of points to the readings you get on your spirometer; and over the next month it should increase the average amount of time you can run without stopping by *Y* and over the next three months by *Z*". The doctor would give the patient a set of indicators that the patient could monitor to see if the prescribed medication was doing its job.

Such sets of indicators can be used either to help confirm that a given diagnosis appears to be correct or to signal that the current diagnosis may well be wrong and alternative explanations should be explored. For example, if the lead diagnosis is that a patient is suffering from exercise-induced asthma, a simple procedure would be to use the spirometer to measure lung capacity before and after the patient exercised. Similarly, if the patient wanted to evaluate the viability of a diagnosis of stress-induced asthma, he or she could generate a set of indicators that anticipated when that person was under stress. As the days progressed, the patient could then monitor his or her body to see if these incidents made it harder for them to breathe. If they found no correlation, then the diagnosis was less likely to be correct. In that case, attention should be refocused on finding the real cause of the illness.

The value of listening to your body is illustrated by a woman in her early 40's who was enjoying a relatively healthy life. She began to experience severe shoulder and neck pain, especially in the morning.

She first thought she was sleeping poorly and changed her pillow, but to no avail. The woman then began to suffer from severe fatigue. Her primary care physician diagnosed her as having hypothyroidism despite laboratory tests showing normal levels of thyroid function. She took thyroid medication for a month, but the pain and fatigue got worse.

She developed excruciating headaches and a feeling of numbness on the left side of her face and feared she might have a brain tumour. One evening, the patient observed some deer walking through her backyard and thought she might have Lyme disease. Her primary care physician insisted on the diagnosis of hypothyroidism and probably should have sought out a second opinion from an infectious disease specialist. When she began to develop neurological symptoms, she was treated aggressively for Lyme disease and now has fully recovered.

Key assumptions check: challenging assumptions

Assumptions are something that people accept as true or certain to happen, but without any proof. They are beliefs or ideas that underpin an argument or a diagnosis. Often a doctor will refer to them as "common wisdom". When teaching critical thinking skills, students often are asked to list the key assumptions they are making about a situation or event. Invariably, about one out of four assumptions turn out to be incorrect when subjected to critical examination. That is a high error rate, but in daily life people often do not notice these errors. They are more likely to focus on the 75 percent of assumptions they made that are correct.

Challenging one's assumptions is one of the most important habits a person can develop. If an unsupportable assumption is identified early in the process, substantial time can be saved by avoiding going down blind alleys. For this reason, much can be gained by conducting a Key Assumptions Check before trying to diagnose what is ailing the patient.

An example of an assumption that has been overturned in recent years relates to fatty liver disease. Before 1980, many physicians called it alcoholic fatty liver disease because they assumed it was caused by consuming too much alcohol. Even if a patient told a doctor he or she

did not drink alcohol, the doctor would assume the patient was lying to cover up a bad habit. In 1980, doctors began to recognize the presence of the disease in patients who did not drink. Doctors now differentiate between alcoholic fatty liver disease and non-alcoholic fatty liver disease.

This faulty mental mindset was exposed in a 2009 National Institutes of Health (NIH) study that reported that 20 percent of the U.S. population had one or the other form of fatty liver disease (Almeda-Valdes, Cuevas-Ramos and Aguilar-Salinas, 2009, p. 518-524; Alise, Manci, Vania and Nobili, 2009, p. 469-474). More recently, the American Liver Foundation estimates that the number of individuals affected by fatty liver disease has increased to 25 percent and it includes many children (American Liver Foundation, 2017).

A Key Assumptions Check is an explicit exercise to list and challenge the key working assumptions that underlie the basic analysis or diagnosis. When the available evidence is incomplete or ambiguous, the interpretation of the symptoms will be influenced by the assumptions patients and their doctors make. By critically examining these assumptions and making them explicit at the start, doctors and patients will:

- Increase their understanding of the basic dynamics at play.
- Uncover hidden relationships as well as links between assumptions.
- Generate new ideas and perspectives.
- Reduce the chances of surprise should new information render old assumptions invalid.

Conducting a Key Assumptions Check can help mitigate several powerful cognitive biases such as Satisficing and Premature Closure. Satisficing is pursuing the minimum satisfactory outcome for the moment (Merriam-Webster, 2019) or, more simply put, selecting the first answer that appears “good enough” (Pherson and Pherson, 2021, p.192). Premature Closure is a form of Satisficing, defined as providing a satisfactory answer before collecting sufficient information and performing a proper analysis. Given the time pressure that doctors are under, they must process the available information quickly and render

an opinion on the likely cause of the problem or the most appropriate next steps to take, often within a matter of minutes.

The process of challenging assumptions can also provide an effective check to counter the cognitive bias called Anchoring. Anchoring is defined as accepting a given value of something unknown as a proper starting point for generating an assessment (Pherson and Pherson, 2021, p. 69). In this case, a doctor may have insufficient data to make a solid assessment and compensates by adopting his or her best guess as the likely diagnosis. The doctor then proceeds to make decisions based on that initial, possibly incorrect, diagnosis. The danger of Anchoring is that, once people arrive at a conclusion, it is exceedingly difficult to convince them they may be wrong.

A Key Assumptions Check can also help guard against Confirmation Bias. This occurs when additional evidence, information, or test results are seen as confirming the initial conclusion or diagnosis. In this case, the doctor is less likely to focus on information that is contradictory to the diagnosis, opting instead to ignore or dismiss it.

Taking time to explicitly challenge key assumptions can help patients and their doctors avoid intuitive traps, including the tendency to:

- Project past experiences onto the current case, assuming that the patient is suffering from a condition previously (or recently) treated in other patients.
- Overemphasize small samples by drawing conclusions when insufficient information is available.
- Not consider multiple explanations for the problem.

The value of challenging initial assumptions is illustrated by the story of an intelligence analyst who started to develop large, round, silver-dollar-sized bleeding sores on the back of her hands shortly after the terrorist attack on 11 September 2001. The patient bandaged them but at meetings people would gasp when they saw blood trickle out from under the bandage and drip onto the conference table. The wounds bled unpredictably, like "Stigmata."

The first doctor the analyst saw guessed that she might have been infected with Anthrax, because there was an Anthrax scare after 9/11. He ordered tests, but they came back negative. A second doctor thought the patient had "impetigo", a bacterial infection of the skin and

started her on an intense course of full-spectrum antibiotics, but the "Stigmata" were untouched. The third doctor incorrectly decided the patient was a "Catholic" psychosomatic whose religious sensibilities were creating the bleeding. A fourth doctor thought her laundry detergent was giving her "contact dermatitis" but the patient was already using unscented, non-phosphate laundry soap.

The patient had started to lose faith in the medical system; each diagnosis had been presented within minutes of her explaining the problem without any kind of rigorous analysis. The solution presented itself when, after reading a book, the patient decided to avoid eating soy products. The aftermath of 9/11 had forced the patient, and many others working in the Washington DC area, to forgo sit-down meals because of the demands of their jobs, and they resorted to consuming food bars that contained soy-protein. Eliminating soy from her diet allowed her to live a normal life again. But, whenever she eats a meal at a restaurant that uses soy, the backs of her hands will itch or blister the next day.

In *How Doctors Think,* Groopman provides a telling example of a doctor who made a bad assumption (Groopman, 2007, p. 55). The doctor recounts the story of a young man who was brought to an emergency room in the wee hours of the night. He had been found wearing dirty clothes and sleeping on the steps of a museum. He was uncooperative when approached by police. The doctor initially assumed he was another homeless hippie who simply needed a good meal and could be sent back out on the street.

After being prodded by an observant nurse, the doctor examined him and discovered he was on the brink of a diabetic coma. The doctor later determined that he was a student who had fallen asleep because he was weak and unable to make it home. His difficulty in responding to the police and the nurses stemmed from the metabolic changes that typified his out-of-control diabetes. A standard procedure for mitigating the risk of an erroneous treatment resulting from a faulty assumption is to run a battery of tests — in this case for blood glucose levels and a toxin screening — on arrival at the ER.

The medical profession is well aware of its susceptibility to cognitive bias and intuitive traps as well as its tendency to not examine

basic assumptions. One of the best antidotes is to involve many specialists from diverse backgrounds and areas of expertise in the diagnostic process. This realization provides one of the intellectual foundations for the establishment of the NIH's Undiagnosed Diseases Program. Some 50 to 100 patients with undiagnosed conditions are invited annually to the NIH Clinical Centre in Bethesda, Maryland, to receive a thorough evaluation and engage in consultations as part of the program.[417] Such a procedure would not be feasible in regular medical practice because the insurance industry would not cover the high costs of the program.

A key factor in the success of the NIH program is that doctors are encouraged to challenge each other's assumptions in a nonthreatening, collaborative environment. The purpose is not to advance anyone's reputation in the profession but to come up with a proper diagnosis that had previously escaped discovery and required more imaginative or systematic thinking.

Premortem analysis and the structured self-critique: asking "what if we are spectacularly wrong?"

Many of us are familiar with the concept of a post-mortem. The purpose of a post-mortem is to review the historical record and evaluate where and why things went wrong. This usually is a prolonged and painful process that can consume considerable resources. Gary Klein wrote an article in the September 2007 *Harvard Business Review* that poses a thought-provoking question: "Why not conduct a premortem type of exercise before we publish our paper or implement our decision to avoid having to initiate a much more embarrassing and labour-intensive process after the fact, should we have turned out to be wrong?" (Klein, 2007)

In *How Doctors Think*, Groopman describes how one of his colleagues, Dr. Karen Delgado, a specialist in endocrinology and metabolism, has intuitively adopted this approach (Groopman, 2007, p. 171). She relates that when she was an intern and would admit a

[4] For more information on the program, go to https://rarediseases.info.nih.gov/Undiagnosed.

patient with what seemed to be a clear and obvious diagnosis, she would ask herself, "What if we are wrong? What else could it be?" Sometimes she could rearrange the data in her mind to come up with a credible alternative diagnosis that was also consistent with the patient's symptoms. If she could not come up with an alternative diagnosis, she could be more confident the original diagnosis was correct.

A Premortem Analysis is conducted to assess whether a key decision, diagnosis, or action could turn out to be spectacularly wrong.[5] A Structured Self-Critique is a systematic procedure that an individual or a small group can use to identify similar weaknesses in its own analysis or recommendations. Both should be conducted midway through the diagnostic process, just as the doctor or the medical team is starting to converge on a single, most likely diagnosis. Premortem Analysis involves brainstorming, which is more of a right-brain or intuitive process. Structured Self-Critique is a more left-brained, analytic process involving checklists.

The primary purpose of these techniques is to reduce the chance of surprise and the subsequent need for a post-mortem should the diagnosis prove wrong. It helps the doctor or the medical team identify potential sources of error that may have been overlooked. Two creative processes are involved:

(1) **Reframing the issue.** The exercise typically elicits responses that are different from the original ones. Asking questions about the same topic, but from different perspectives, opens new pathways in the brain.

(2) **Legitimizing dissent.** Members of a group will often not speak out if they think most of the group would not agree with them. With Premortem Analysis, all the members of the group are asked to come up with a positive contribution to the session by identifying weaknesses in the previous analysis.

A major benefit of the technique is that it empowers those who have unspoken reservations (for example, a nurse or doctor who has

[5] In *Structured Analytic Techniques for Intelligence Analysis*, Pherson and Heuer adopted Klein's concept and expanded it into a more robust two-stage process involving a right-brained Premortem Analysis and a left-brained Structured Self-Critique.

just joined the team) to speak out in a context that is consistent with perceived group goals. The approach embraces two different methods to explore all the ways a diagnosis could be incorrect, using a totally unbounded as well as highly structured process. By legitimizing dissent, the techniques offer a strong defence against the challenges of Groupthink. Groupthink is choosing the option that most members of the group agree with or ignoring conflict within the group due to a desire for consensus.

Premortem Analysis protects doctors, the medical team, and their institutions against the Vividness Bias, which involves focusing attention on a single vivid scenario or diagnosis while other possibilities or potential alternative hypotheses are ignored. Vividness Bias can also come into play if the doctor is deluged with promotional materials and media advertisements for medicines that treat a particular ailment. As a result, doctors could become more susceptible to asking if their patients suffer from an ailment that gets a lot of public attention.

An intuitive trap that Premortem Analysis helps correct is Relying on First Impressions (defined as giving too much weight to first impressions or initial data, especially if they attract our attention and seem important at the time) (Pherson and Pherson, 2021, p70). This is a trap that is hard to escape, given the current state of medical care in the United States. Doctors are under extreme pressure from the insurance industry to make decisions as quickly as possible to keep costs (as measured by a doctor's time) to a minimum.

The value of integrating the Premortem Analysis and Structured Self-Critique techniques into a diagnostic process was demonstrated by a paediatrician who vetoed the decision to dismiss a patient from a hospital and saved his life. The patient was a high school student who was recuperating from a bad cold when he and several of his friends were thrown into a heated swimming pool on a cold evening in May.

On Monday after school, he lay down in bed saying he felt "weird"; his legs "were warm on the sides and cold on top". He had a fever, but his hands were icy cold. His mother called her paediatrician who examined her son, noticed some minuscule dots on his chest, and arranged for him to be admitted to the hospital. On arriving, the doctors

performed a spinal tap to test for bacterial meningitis. When the father arrived at the hospital, the entrance to the emergency room was blocked by a long ribbon of yellow tape. The security guards told him no one could cross the line because the facility was quarantined. He said, "My son is in there", and they asked for his name. When they heard it, they told him, "You are allowed to proceed".

The patient's fever and the tests turned out to be negative. The ER doctor started to release the patient when the paediatrician called in to check on the patient's status. The doctor's concern was: What if the diagnosis was wrong? He knew that bacterial cultures from the spinal tap fluid can take two or three days to show positive results and that the patient was still at risk. In the worst case, how could the doctor explain why the patient died after medical personnel had said all was well?

The doctor insisted that the ER doctor start a heavy dose of intravenous antibiotics as if the patient had bacterial meningitis. The patient recovered, but it took many months before he could attend a full day of school without taking naps. The after-effects of the episode affected him for many years, but the doctor's attentive intervention almost certainly saved his life.

A key challenge to conducting a Structured Self-Critique is making time in a busy doctor's schedule to review an appropriate set of checklists. Even more difficult is finding the time to get a "team' together to conduct a Premortem Analysis brainstorming exercise. At a minimum, a partial solution to consider would be for doctors to take a minute at the end of an appointment to ask them, "What are the consequences if my diagnosis is wrong, and how could that have happened?"

These structured techniques provide useful strategies to refocus attention on the need for diagnosis, to challenge assumptions, and to look for lead indicators of looming health crises. Care must be taken, however, to use them correctly. The remainder of this article defines each technique and describes the role each can play. It also provides a step-by-step process for using each technique.

Appendix: six structured analytic techniques multiple hypothesis generation

Multiple Hypothesis Generation is a structured way to generate a comprehensive set of mutually exclusive hypotheses for explaining a particular problem, condition, or behaviour.

Multiple Hypothesis Generation is part of any rigorous analytic process because it helps people avoid common pitfalls such as coming to premature closure or being overly influenced by first impressions. It helps one think broadly and creatively about a range of possibilities. The goal is to develop a Mutually Exclusive and Comprehensively Exhaustive (MECE) list of hypotheses that can be scrutinized and tested against existing symptoms, test results, other information, and any new data that may become available in the future.

The Multiple Hypothesis Generation technique is a useful tool for broadening the spectrum of plausible hypotheses. It is particularly helpful when there is a prevailing, lead hypothesis and little thought has been given to alternative possibilities. It is also helpful when there are several members of the medical team, none of whom can agree on what should be the lead diagnosis.

The Process

Step 1: Succinctly define the medical case, illness, problem, activity, or behaviour that is under examination.

Step 2: Establish the lead diagnosis or "hypothesis" for explaining this problem, activity, or behaviour.

- The lead hypothesis could be the one you were given, the most obvious explanation, orthe conventional wisdom.

Step 3: Critically examine the lead hypothesis by identifying and listing its key components.

- Use the journalist's classic list of "Who, What, How, When, Where, and Why" to evaluate all critical dimensions of the lead hypothesis.
- Some of these questions may not be appropriate for the particular problem or behaviour you are examining.

Step 4: Generate plausible alternative explanations for each key component.

- Once this process is complete, you should have lists of alternative explanations for several components of the lead hypothesis.
- Strive to keep the alternative explanations on each list mutually exclusive.

Step 5: Identify all the possible permutations that can be generated using these lists.

Step 6: Discard any permutation that simply makes no sense.

Step 7: Evaluate the credibility of the remaining hypotheses by challenging the key assumptions of each component.

- Some of these assumptions may be testable themselves.
- Assign a "credibility score" for each hypothesis, e.g., using a 1– to 5-point scale.

Step 8: Re-sort the remaining hypotheses, listing them from most to least credible.

Step 9: Select from the top of the list those alternative hypotheses most deserving of attention (and inclusion in an Analysis of Competing Hypotheses matrix, if appropriate).

Analysis of competing hypotheses

Analysis of Competing Hypotheses (ACH) is a tool to aid judgment on issues requiring careful weighing of alternative explanations, hypotheses, or diagnoses.

ACH involves the identification of a complete set of alternative explanations (presented as hypotheses or diagnoses), the systematic evaluation of each, and the selection of the explanation that fits best by focusing on information that tends to disconfirm rather than confirm each of the explanations.

Doctors face the perennial challenge of working with incomplete, ambiguous, anomalous, and sometimes deceptive information. In addition, strict time constraints and the need to "make a call" often conspire with natural human cognitive biases and intuitive pitfalls to produce inaccurate diagnoses. ACH improves the doctor's chances of overcoming these challenges by requiring her or him to identify and refute all but one credible alternative explanation based on known

symptoms, laboratory tests, assumptions, knowledge gaps, and other pertinent information.

The Process

Step 1: Create a matrix.

Step 2: Identify all the possible diagnoses or hypotheses and list them at the top of each column in the matrix. Be sure that they are mutually exclusive and comprehensively exhaustive.

Step 3: List all significant pieces of relevant information (symptoms, test results, validated assumptions) in the rows going down the left side of the matrix. (Include any conspicuous absence of evidence.)

Step 4: Indicate in each cell whether the relevant information is highly consistent with, consistent with, inconsistent with, highly inconsistent with, or is not applicable to each diagnosis. Consider information as highly inconsistent if the item makes a compelling case that the diagnosis must be incorrect. Similarly, list information as highly consistent if a compelling case can be made using this information to show the diagnosis is correct.

Step 5: Discount all diagnoses where the listed inconsistent information makes a persuasive case for dismissing the hypothesis.

Step 6: Determine how sensitive the lead diagnosis (es) is to a few critical items of relevant information. Consider the consequences for the analysis if that finding were wrong, misleading, or subject to a different interpretation.

Step 7: Identify key facts or future actions the team should explore to distinguish between the lead diagnoses or increase confidence that the chosen diagnosis is correct.

Indicators

Indicators are a pre-established set of observable phenomena (or symptoms) that are monitored and assessed to confirm or disconfirm the viability of a diagnosis.

Preparation of a detailed list of indicators or symptoms to track provides a useful learning experience for all participants. It facilitates

the exchange of knowledge among those on the medical team and can spur a decision to order new tests or conduct additional research. The identification and monitoring of confirming and disconfirming indicators can spur early warning of untoward developments or unanticipated changes in the condition of the patient. The human mind tends to see what it expects to see and to overlook the unexpected. Indicators take on meaning only in the context of a specific diagnosis with which they have been identified.

The Process

Step 1: Working alone, or preferably in a small group, brainstorm a list of indicators that would confirm the validity of the diagnosis (es). Also, create a list of indicators that would demonstrate that the favoured diagnosis is incorrect.

Step 2: Review and refine both sets of indicators for each diagnosis(es), discarding in each set any that are duplicative and combining those that are similar.

Step 3: Examine each indicator to determine if it meets the following five criteria. Discard those that are found wanting.

- **Observable and Collectible.** There must be some reasonable expectation that, if present, the indicator will be observed and reported to the medical team. If an indicator is used to track whether change has occurred over time, it must be collectable over time.
- **Valid.** An indicator must be clearly relevant to the stated diagnosis and accurately measure the problem, illness, or phenomenon at issue.
- **Reliable.** Data collection must be consistent when comparable methods are used. Those observing and collecting data must observe the same things. Reliability requires precise definition of the indicators.
- **Stable.** An indicator must be useful over time to allow comparisons and to track events. Ideally, the indicator should be observable in the near future so that the doctor has time to react accordingly should contrary indicators prove the diagnosis to be incorrect.

- **Unique**. An indicator should measure only one thing, and in combination with the others, should only point to the selected diagnosis and never to any alternative diagnoses previously considered.

Key assumptions check

A **Key Assumptions Check** is a group exercise to list and challenge the working assumptions that underlie a key judgment or diagnosis.

Assumptions are unavoidable and necessary.

- It is reasonable to take certain things for granted.
- It is sometimes necessary to make assumptions until confirmation comes.
- Estimations and complex problems often require simplifying assumptions to make them manageable.

The quality of an assumption, however, can range from poor to good. Much depends on the basis of the assumption. Over the years, facilitators have observed that approximately one in four key assumptions usually collapses on careful examination.

The Process

Step 1: Assemble a small group. Gather a small group of people who are familiar with the case, along with one or two "outsiders' who can come to the table with an independent perspective. An "outsider" is not informed about the patient or the case but understands what the group is trying to accomplish. Ideally the group would include a few doctors and nurses, the patient, one or two family members, and an intern or health professional not familiar with the case.

Step 2: Define the key objective. If necessary, provide the participants with a short summary of the case one or two days before the session. Ask them to identify two or three assumptions that are likely to underlie the analysis. When the group is assembled, briefly review the case and answer any questions. Develop a consensus on the objectives of the session.

Step 3: Ensure agreement on the definition of an assumption. An assumption must be true for another condition or

development to be valid; it can also be a fact or statement that people will take for granted. The latter are often generated by cultural bias or reflect an entrenched mindset.

Step 4: List your key assumptions. On a whiteboard or an easel, list all the assumptions identified by the participants. Resist the temptation to critique the assumptions as you list them.

Step 5: Evaluate the assumptions. After developing a complete list, go back and critically examine each assumption. Encourage the participants to ask themselves the following questions. You may want to display these questions on another easel, on a whiteboard, or provide it as a handout.

- How much confidence do I have that this assumption is valid?
- Why do I have this degree of confidence?
- Under what circumstances might this assumption prove untrue?
- Could it have been true in the past but is no longer true today?
- If it turns out to be invalid, how much impact would this have on the diagnosis?

Step 6: Categorize the assumptions. Place each assumption in one of three categories:

(1) Basically solid or well-supported (i.e., self-evident or common sense).

(2) Correct, with some caveats (i.e., based on history, doctrine, or "normal" behaviour).

(3) Unsupported or questionable (i.e., entirely hypothetical or even far-fetched—I could wake up tomorrow to find out it was wrong and understand why).

Step 7: Identify key uncertainties. Some Unsupported Assumptions may turn out to be Key Uncertainties. These uncertainties should be noted for follow-up testing or research.

Step 8: Organize the list of assumptions. Group the assumptions into three categories—Solid, Caveated, and Unsupported. Prioritize the assumptions in each group.

Step 9: Consider next steps. Ask the group if it would be appropriate to take the list of Key Uncertainties and possibly some of the caveated assumptions and generate a list of things to do to resolve

the uncertainty. What additional tests should be ordered, what questions should be asked, and what new research is needed?

Step 10: Generate a final product. After the session, circulate a list of prioritized assumptions and any future actions that the group is spurred to take as a result of the brainstorming session.

Premortem analysis

Premortem Analysis is conducted prior to finalizing an analysis or diagnosis by a doctor or, preferably a medical team, to brainstorm how the chosen diagnosis could be spectacularly wrong.

The goal of Premortem Analysis is to challenge — actively and explicitly — an established mental model or analytic consensus in order to broaden the range of possible explanations or diagnoses that are being seriously considered. This process helps reduce the risk of analytic failure by identifying and analysing the features of a potential failure before it occurs.

The Process

Step 1: Gather in a room all those who are involved in the process of making a diagnosis or have a vested interest in the diagnosis being correct.

Step 2: Tell the group to imagine that some time has passed since the diagnosis was made and the patient has since died or his or her condition has deteriorated in a totally unexpected and dramatic way. No one now challenges the conclusion that the diagnosis was wrong—it was a spectacular mistake!

Step 3: Engage the team in using a brainstorming technique — such as Cluster Brainstorming or Circle boarding™ — to explore plausible explanations for this unexpected outcome. Try to identify all the possible ways the analysis could be wrong. Encourage everyone to come up with ideas. Sometimes a silent brainstorming technique is preferable, such as passing out notecards and asking each participant to write down one or two ideas. Then collect all the cards and write the ideas on a whiteboard or an easel. Challenge the group to see who can come up with the best idea of how a misdiagnosis came about.

Step 4: Look for patterns or groups of ideas and revisit your conclusions and evidence to see if you have overlooked, misinterpreted, or ignored key information.

Step 5: Decide if any alternative diagnoses merit attention, and whether any new tests should be administered, or additional research conducted.

If sufficient time is not available to work through this entire process, a fall-back strategy would be to add the following question to a list the doctor uses before he or she comes up with a diagnosis:

"Six months has gone by and the patient has died. What would explain how this happened?" **Structured self-critique**

A **Structured Self-Critique** is a systematic procedure that a small team or group can use to identify weaknesses in its own analysis.

When conducting a Structured Self-Critique, all members of the medical team don a hypothetical "black hat" and become critics of their own analysis. From this perspective, the medical team responds to a list of questions about sources of uncertainty, the analytic processes used to arrive at the conclusion(s), assumptions made, the diagnosticity of evidence, information gaps, changes in the broad context in which events happened, alternative decision models, potential deception, and cultural expertise.

When questions are asked about the same topic but from this critical perspective, team members often give a different answer than they gave before. For example, if a team member is asked if he or she supports the team's conclusions, the answer will usually be "yes". However, if all team members are asked to look for weaknesses in the team argument, the same team member may give a quite different response.

This change in the frame of reference is intended to change the team dynamics. The critical perspective should always generate more critical ideas. Team members who may have previously suppressed questions or doubts because they lacked confidence are now empowered by the technique to express divergent thoughts. If this change in perspective is handled well, each team member will know that they have added value to the exercise by being critical of, instead of supporting, the previous judgment.

A Structured Self-Critique exercise is helpful when a Premortem Analysis raises unresolved questions about the viability of the original diagnosis. Doctors find the Structured Self-Critique a helpful double-checks when dealing with a particularly difficult diagnosis. It can also help them resolve issues when members of the team have conflicting opinions.

The Process

Step 1: Remind all participants that they are now wearing a "black hat" and their job is to be a critic — not an advocate — of the team's analytic conclusions. Their job is to find weaknesses in their analysis. Can the diagnosis stand up to brutal scrutiny? Ask the following questions in conducting the critique:

- **Sources of Uncertainty.** Should we expect to find: (a) a single, obviously correct answer; (b) a most likely answer, together with one or more alternatives that should also be considered; or (c) a number of possible explanations that merit attention?
- **Analytic Process.** In the initial analysis, did the team do the following: Did it identify potential alternative diagnoses and seek more information on these diagnoses? Did it seek a broad range of diverse opinions by including others not familiar with the case in the deliberations? If not, this increases the odds of the team having a faulty or incomplete analysis. Either consider doing some of these things now or lower the teams' level of confidence in its judgment.
- **Critical Assumptions.** How recent and well-documented is the evidence that supports the assumptions made in this case? Brainstorm circumstances that could cause each of these assumptions to be wrong and assess the impact on the team's analytic judgment if an assumption is wrong. Would the reversal of any of these assumptions support any alternative diagnosis?
- **Diagnostic Evidence.** What lead diagnosis did we identify, and what are the most diagnostic items of evidence that have enabled the team to reject the alternative diagnoses? For each item, brainstorm one or more reasonable alternative

interpretations of the evidence that could make it consistent with an alternative diagnosis.

- **Information Gaps.** Are there gaps in the available information, or is some of the information so dated that it may no longer be valid? Is the absence of information readily explainable? How should it affect the team's confidence in its conclusions?
- **Missing Evidence.** Is there any evidence that one would expect to see in the interviews of the patient and the tests performed if the diagnosis is correct, but which is NOT there?
- **Anomalous Evidence.** Is there any anomalous item of evidence that would have been important if it had been believed or could have been related to diagnosis but was rejected as unimportant or not significant? If so, try to imagine how this item might be a key clue to an emerging alternative diagnosis.
- **Changes in the Broad Environment.** Might any social, technical, economic, environmental, or political changes play a role in why this particular diagnosis was chosen?
- **Alternative Decision Models.** Were any judgments based on a rational actor assumption? If so, consider the potential applicability of other decision models specifically that the action was the result of standard organizational processes, or the whim of a close-minded or overly stressed doctor. If time to do a more thorough analysis is lacking, consider the implications of that for confidence in the team's judgment.
- **Cultural Expertise.** Is the team or one of its members unduly influenced by cultural factors or ignorant of cultural norms that may be associated with the problem?
- **Deception.** Would the patient or anyone on the team have motive, opportunity, or means to engage in deception to influence what diagnosis was made? Does the patient have a history of engaging in deception or lying about his or her past behaviour?

Step 2: Based on the answers to the themes of inquiry outlined above, list the potential deficiencies in the evidence and logic that

support the diagnosis in order of their potential impact on the correctness of the diagnosis.

Step 3: Discuss what the group could have done to avoid any of the potential flaws in thinking discovered during the Structured Self-Critique exercise.

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REFURBISHING INTERNATIONAL RELATIONS AS A SOCIOLOGY OF ELITES. A RATHER PERSONAL ACCOUNT AT THE CENTENNIAL OF THE DOMAIN

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Abstract:
A newcomer amongst social sciences, International Relations has been constantly inhabited by soul searching or tried to balm inner feuds while vying for public relevance. Remembering the centennial of the domain and the dual starting points, namely the creation of a university chair in Aberystwith, Wales and the founding of CFR-Council for Foreign Relations in the USA, this article tries to chart a way forward for IR. The answer advocated here is the refurbishment of the domain as sociology of the elites (but not necessarily for the elites) as against the classical manner centred on theories and different paradigms. Such argument is supported not only by the perusement of literature but also by classroom experience.

Keywords: *International relations theory, schools, theories, elites*.

Introduction

According to the over spoken conventional hagiography, the year of 1919 saw the creation of the first International Relations Chair at the University of Aberystwith, Wales. In that very same year, over the Atlantic, one witnessed the founding of the Council on Foreign Relations (CFR), now matured to be one of the most diversified meeting points for discussing international affairs. Both events boded well with the idealist albeit clumsy efforts made by President Woodrow Wilson to fit on tracks the League of Nations, the institutional tool to end all wars and scale down any looming conflicts through arbitrage.

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All of the above came to mend the cataclysmic event which was the First World War, gruesome testimony to what inflamed nationalism can perpetrate using the ambitus of industrial age. Fast forward to the present age when we celebrate 100 years of IR literature, the domain has grown from the shadows of predecessor sciences crafting an autonomous methodology of its own, displaying intellectually consummating inner feuds and recovering after soul searching turning points. However, such autonomisation was not always for the better of the social science universe as a whole, rather was similar to a huge glacial broken from Antarctica only to melt in the solitude of wayward waters (Anievas, 2014; Zarakol, 2019, p. 1-16). For the differences between history and IR as well as about the reproaches made by historian to IR scholars see Ashworth (June 20, 2012) and George (May 19, 2013).

Only loosely tied to other sciences like history, sociology, philosophy, and so on, it is the argument of the present article that IR goes in circles having difficulties and being opaque to the outsiders who not possess IR professional background or training. In order to mend such predicament, we propose here that the IR domain is retooled as sociology of the elites. The proposition given here combines reading, writing as well as teaching different IR seminars over the span of four years at both undergraduate and MA level.

This article entails two parts: the first one summarises the introductory narratives in IR theory, whereas the second part ponders on the potential meaning of an elite-centred sociology and how the latter might serve better the educational process. The last part hosts the conclusion.

From classical debates to an ad hominem historiography

Each student coming to the field of international relations is served with a narrative based on dualities: the first one captures the distance between the historical founding moment and the historiographical one, namely the 1648 Westaphalian Peace Treaty to end the Thirty Years War and 1919 which laid the first brick at the foundation of the discipline. Westphalian Treaty (or treaties, to be fair) has been read as the birth of the modern nation-state invested with sovereignty. Since that moment on, the interdiction to interfere in the

domestic affairs of another political unit stood as an ethical and juridical ideal for the manner in which states dealt each other, even though the practical conduct fell short from it (Krasner, 1999; Joffe, November-December 1999; Karp, 2008). 1648 Westphalia remains a potent label even though it has been increasingly criticised and put under scrutiny in recent decades (Osiander, 2001). As to 1919, it was construed as the moment when the first chair or international relations was created at Aberystwyth, Wales, in Great Britain.

Apart from the considerations sketched above, the dynamics of the domain is narrated as a succession of pivotal quarrels called debates: the second historical episode and also the locus of the **first academic debate** speaks about realists and idealists (or wishful thinking liberals; both labels are seldom levelled) of the 1920s and 1930s, in itself a demythicised restatement of Cain slaying the bona fide Abel. The former group, namely the realists were equipped with a philosophic pessimistic outlook on human nature advocated balancing Hitler, whereas the latter's philanthropy and belief in the Society of Nations rendered them impotent witnesses of doom. Such descriptive Manichaeism is present in Henry Kissinger's writings. His personal account on diplomacy is construed between two clay figures – on the one side there is Theodore Roosevelt with his rugged lucid realpolitik, on the other looms Woodrow Wilson, the ex-cathedra utopian. (Kissinger, 2007, p. 25-47; Kissinger, 2015, p. 198-218) Fast forward we reach the Cold War, another manicheist laboratory where the real-life clash between the West and Soviet Communism is mirrored by neoliberals or institutional liberals (both labels conflated) and neorealists or structural realists. More scientific than their earlier versions, both parties dress the garb of behaviourism and draw heavily from mathematics and cybernetic models. This episode is personalised: in one corner there is the couple Robert Keohane and Joseph Nye Jr., emphasizing interdependence and soft power as supplements to the classical will to power (Keohane and Nye, 2009). On the other side one can count on Kenneth N. Waltz, the father of neorealism who depicts international politics as an extrapolation of the homo oeconomicus, with states running their affairs dispassionately, frequently calculating profits and costs - a more sober image than Reinhold Niebuhr and Hans

Morgenthau's fallen and sinful individuals. Once reaching this point, the account takes into consideration other streams of thought like neomarxism, constructivism, Johan Galtung's and Kenneth Boulding's peace theories (Patomaki, November 2001; Beriker, July 2008; Whitehead, August 30, 2013; Soursa, 2018) – a drive towards multiversity at the same time with the post-1970 international system moving itself from bipolarity towards multipolarity.

The late 1990s and early 2000s debate whether there is or should be any ongoing debate. The awareness that multiple lenses are available on the table and should be alternatively put on is acknowledged even by recent strands of realists in the ilk of Stephen M. Walt. Moreover, even though many lament the ongoing hegemony of realism,"in reality realism shows up as the dominant paradigm in less than 10% of books and journal articles" according to a 2008 survey (Sharman & Weaver, 7 April 2011, p. 14). Its decline correlates with the emergence of a plural landscape in which not only realism is in decline and constructivism on the rise, but theoretical work also gains more weight (at least according to a survey of English language literature):

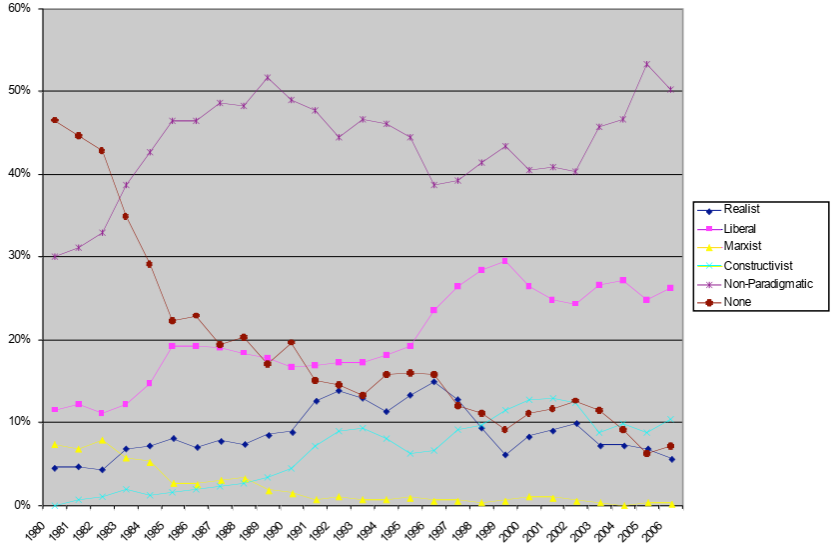

Figure 1: Percentage of Articles by Paradigm, 1980-2007 (Source: Maliniak, Oakes, Peterson, Tierney: August/ September 2007)

The lists with the most valued scholars also reflect plurality of allegiances with different schools:

Rank	Names	Responses	Percent
1	Robert Keohane	422	56
2	Kenneth Waltz	311	41
3	Alexander Wendt	248	33
4	Samuel Huntington	155	21
5	John Mearsheimer	138	18
6	Joseph Nye	125	17
7	Robert Jervis	113	15
8	Bruce Bueno de Mesquita	109	14
9	Bruce Russett	83	11
10	Robert Gilpin	78	10
11	Peter Katzenstein	69	9
12	Stephen Krasner	68	9
13	James Rosenau	60	8
14	John Ruggie	49	7
15	Michael Doyle	42	6
16	James Fearon	41	5
17	Immanuel Wallerstein	31	4
18	Robert Cox	28	4
19	Hans Morgenthau	27	4
20	Francis Fukuyama	26	3
21	J. David Singer	21	3
22	Stephen Walt	19	3
23	Jack Snyder	17	2
23	Robert Axelrod	17	2
23	Stanley Hoffmann	17	2

Table 1: The lists with the most valued scholars
(Source: Peterson, Tierney, Maliniak, January 2005, p. 19)

Another more recent reference to consider is Teaching, Research & International Policy (TRIP). According to TRIP 2014, the most

influential figures were: 1) Alexander Wendt (47.1%); 2) Robert Keohane (32.13%); 3) Kenneth N. Waltz (27.55%); 4) John Mearsheimer (24.05%); 5) Joseph Nye Jr. (21.97%); 6) Samuel Huntington (21.14%); 7) Barry Buzan (13.51%); 8) James Fearon (11.88%); 9) Stephen M.Walt (8.49%); 10) Martha Finnemore (7.82%) (MetaIndex, 2014).

The diversification of the scientific picture appears to be similar in present French IR academia as one can see below:

	Constructivism	English School	Feminism	Liberalism	Marxism	Realism	Political sociology	Institutionalism	Other paradigm	I do not use paradigmatic analysis
All	22	4	2	15	4	16	**	**	15	22
United States	20	2	2	20	2	16	**	**	12	26
France	24	2	0	7	2	23	6	2	8	24

Table 2: Theoretical leanings of French IR scholars (according to TRIP 2014) (Source: Cornut, Battistella, 2013, p. 303-336)

Another study made by Sherman and Weaver entails, among others, that book editors channel authors towards 'telling a story' likeable by the public rather than pursuing a tight theoretical framework interesting for fewer readers (Sherman and Weaver, September 2011, p. 16).

Even those debates (especially the first interwar one) most probably did not exist; they stuck with us and are repeated almost each time by the introductory classes in IR (Ashworth, 2002; Wilson, 2012).

Given the above, we can ask ourselves whether our present age is also fractured by other meaningful debates, albeit smaller in scale. Perusing literature, three ersatz debates can be listed according to our view:

- one between IR theory understood as systemic outlook and foreign policy analysis (FPA). This strand might be a response to the outcry of policymakers that IR scholars are not relevant enough and remain entrenched in the confines of a medieval quarrel of Universals (see here Guzzini, 2007; Kertzer, Tingley, 2018, p. 21-23; as, 2018).
- another debate is about whether IR still remains an American science (to quote Stanley Hoffmann's 1977 interrogative article (Hofmann, Summer, 1977, p. 41-60; Walt, Spring, 1998, p. 29-32 and 34-46) or has become a widespread phenomenon. Barry Buzan and Ole Weaver have teamed up with several ethnic non-Western authors to try to grapple some answers on the topic (Buzan, Acharya, 2010). This one might have the best chances to be upgraded to a full-fledged mainstream debate for decades to come and bear the most fruitful consequences (either a North-South synthesis, similar to the neo-neo synthesis present in Keohane's late 1990s writings, either some sort of compromise between 'Northern' and 'Southern' researchers).
- the third polemic, spilling over the boundaries of IR into online punditry sets the contest between globalists and nationalists. It is not necessarily a Methodenstreit[1], a squabble regarding the best way to be scientific and more about political stance. It goes beyond the scope of this article to ponder whether this third polemic is an updated avatar of the pros and cons of the Washington consensus in the 1990s.

A *nota bene* should be added in order to emphasize that many scholars swing between various research agendas or maintain an agnostic stance with regard to all schools as the TRIP surveys in recent years have shown.

[1] Methodensreit or the battle of methods in English was a polemic started in the 1880s between the disciples of the German historical school and those of the Austrian one like Carl Menger, each maintaining different premises about the manner in which markets were born and whether they were based on universal or cultural, contextualised laws.

Cutting across the structure of the debate, there is the notion of authorship. Vying for influence beyond the wall of academia, many figures write regularly on blogs or maintain a constant presence in the press. Stephen Walt, Daniel Drezner, Tom Ricks, Fareed Zacharia, Joseph Nye disperse their ideas about the burning matters of the day and some of them have achieve celebrity status. They themselves orbit around the elites and the institutions they often write about. A special mention deserves Stephen Walt and John Mearsheimer along with their vitriolically controversial "Israel Lobby and US Foreign Policy". After a tortoise apparition, the book has been frequently read in antisemitical key and drew into polemics senior figures like Jimmy Carter, Zbigniew Brzezinski, Alan Derschowitz, Tony Judt and others (Mearsheimer, Walt, 2008; Rabinovich, 2008; Schouten, 2009; Spitzer, 01 April 2013; Sperber, 2015). Moreover, the two author abovementioned have been pinned down to this book (and for this book) and finally embraced their controversial new public personas. However, only a handful of readers did noticed in their writing on the Israel lobby a departure from the orthodox realist view of the state as a unified actor and a movement towards a pluralistic view, even though an unpolished one, all at the same time with the couple descending from the ivory tower towards journalism (The Israel Lobby and U.S. Foreign Policy: Roundtable Review, 2007, p. 6-7)

In post-communist Romania, IR literature boomed vigorously at least in quantitative terms. As a means to celebrate freedom and put communism in brackets, an intellectual spree of translations nourished a plethora of articles and books all eager to catch up with the Western market of idea. Here, like elsewhere, international relations have become both an etymological label showing one's cosmopolite spirit whilst being in touch with present times. Earning an IR diploma at the individual level, or guesting an IR & European Studies chair at the university level spelled the promise of success in the public eye. Perhaps the very word 'international' compensated, somewhere deep inside, for all those years when ordinary Romanians were not allowed to travel freely abroad.

And also like elsewhere, the IR domain developed a two-layered aspect. The upper, most sophisticated one deals with Western theories

and scientific peculiarities in the field. The lower, let us call it the 'layman level' displays a journalistic demeanour, feeding an eager and over politicised public. The pundits who animate this intellectual sphere are separated into three categories:

1. a narrow group of academics skilled in English and dedicated to scientific rigour who prefer to publish rare qualitative papers. Many of them are youngsters in their 20s and 30s pursuing a PhD degree but the age cap goes even further (the stratum is also to be found at the aforementioned point No.2);

2. journalists who write open editorials and are constantly in the limelight. Their ideological proclivity vary much from right to left (rightists display the gamut between moderately towards staunchly pro-Western attitudes (https://inliniedreapta.net/; Lăzescu, April, 14, 2021; Critic atac, 3 aprilie 2020,) whereas leftists are critical to what they consider to be the unfair capitalist geopolitical and capitalist word order);

3. a variety of academics who write for both kinds of public and are more or less part of technocracy. Otherwise put, they might very well be academics, political figures, political consultants, diplomats, employees working for think tanks all vying for influence and acknowledgment. Here the list comprises, but is not limited to, names such as: Valentin Naumescu, Vasile Dîncu, Daniel Dăianu, Ioana Petrescu, Iulian Chifu, Iulian Fota, Ştefan Popescu, Armand Goşu, Ovidiu Raeţchi, Şerban Cioculescu. (Naumescu, 09.03.2021; Naumescu, 06.04.2021; Naumescu, 26.04.2021; Dăianu, 2009; Dăianu, Dec, 10, 2018; Petrescu, 2016; Petrescu, October 27, 2019; Petrescu, October 7, 2021; Chifu, December 22, 2017; Chifu, Frunzetti, 2018: 7-19; Fota, July 12, 2019; Fota, January 16, 2020; Popescu, 21.01.2020; Popescu, 17.02.2020; Raeţchi, 2020; Raeţchi, August 15, 2020; Raeţchi, August 30, 2020; Cioculescu, 2007; Cioculescu, 2010; Cioculescu, March 9, 2015)

More often than not, the bibliographic references employed in Romanian IR debates are connotative for the latecomer status, even though it would be highly unfair to draw hasty conclusions as many researchers display acquaintance with the most sophisticated perspectives generated by the international academic journals. However, both IR introductory classes and students nauseatingly

revolve around a handful of thesis like Hans Morgenthau's power politics, Kissinger's diplomacy, Huntingtonian clash of civilisations frequently pitted against Fukuyamist end of history or Joseph Nye's soft power – the latter concept being elevated to a seemingly UNESCO world heritage status. Unfortunately, this focus on over celebrated books and scholars correlates with ignoring other fruitful references or even secondary writings of the abovementioned authors (Following class intercourse or the coordination of different dissertation, the author's account found very few discussion on let's say Morgenthau's 1946 *Power politics vs scientific man*; Huntington's pioneering book on military sociology – the 1957 *Soldier and state* or Fukuyama's later works on political science[2]). Not to mention that only a couple of those names are still present in Peterson, Tierney and Maliniak (2005) study or in the following contemporary TRIP surveys. It appears that the sociologic structure of the debate features a prestige-centric quality, with the IR public being passionate about high-profile celebrities (Dizikes, January 27, p. 2014)[3]. What we see here is the Matthew effect at work (Dizikes, January 27, p. 2014).

From here on, the present author has noticed a difference in preferences. Whereas teachers working for civil universities and (seemingly) without ties to political figures embrace critical theories (constructivism, feminism, postcolonialism), those working in military universities or with military background, or politically engaged, tend towards methodological conservatism and display a penchant for realism.

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[2] About the fixation with Fukuyama's end of history thesis his presence in the references of different open editorials and academic articles: (Rusu, 2010, p. 421-432; Barbu, 23 June 2014; Andreescu, Summer 2020, p. 189-204; Atudorei, 2020, p. 148-152)

[3] Another proof of such prestige based on structure dialogue is the fact that less known or not yet translated authors from the same universities or schools of thought are not discussed. Namely, I have not seen discussions on the work of Andrew Moracvsick or Anne-Marie Slaughter, even though both wrote high-quality papers and Slaughter was associated for the most part of her career with Princeton University and also served as president of the American Society of International Law, Princeton being the same university of Gilpin, Nye, Keohane. See her page at the New America Foundation, https://www.newamerica.org/our-people/anne-marie-slaughter/. Other names that are not associated with Princeton and Harvard or even come from outside IR like James Fearon, Peter Turchin, Jan Morris, get rare accolades, if any.

Setting together the American and Romanian landscapes makes a poor and insufficient case for generalisations; at best, it provides a starting point for a study about the spread of ideas between centre and periphery. However, this is beside the point, as our argument is not aimed at a new international relations grand theory but at a better manner to teach the existing ones. Both the American and the Romanian IR epistemic communities (so as to restrict ourselves, but we could very well add others) possess features that make them favourable for the sociology of elites. The chapter bellow will make the case for this.

The sociology of elites – the bridge gaper inside and outside Academia

Created as an autonomous domain dedicated to study the occurrence of warfare and subsequently its prevention, the new inchoate science of IR carried within it domestic fistfights stemming from the very vagueness of the name and therefore of its boundaries. International relations theory, geopolitics, security studies, later on European studies, global studies (Koos and Keulman, 2019, p. 327) and, last but not least, military sciences, all monikers that reflect a rather prescientific demeanour in Kuhnian terms. If one adds to the list the latecomer *intelligence studies,* the task of semantically ordering these disciplines grows even more difficult. Not only the name, but the object of study is plagued by connotative issues. Do we study relations between nations (people-to-people) or between nation-states (meaning G-to-G matters and thus we focus more on institutions and political matters)? Never truly settled, the discipline went forward and the progress meant increasing the aperture to include more and more items on the research agenda (Koos and Keulman, 2019, p. 3-4). With the increase and diversification, come pros and cons. On the pro side: plurality is to be welcomed in any scientific endeavour as competition provides a dynamic check-and-balance against the habit of the mind to settle with easy stereotypes and monocausal explanations. On the con side: running after many rabbits at the same time might consume one's resources while ending up nowhere. This shortcoming becomes a problem when it comes to reproducing elites. Who should bear the task

to prepare new people and what should they be instructed in? If we are to speak about the university chairs in IR & European Studies, one has to answer several questions:

- how can one trim the diverse agenda in a short span of time (one semester class) and make sense of each issue?
- if one decides to toss away some issues while privileging others (let's say focus on the balance of power over international aid or vice versa) how does one establish criteria?
- taking employment into account, what are the institutions the future graduates are preparing for: the Minister of Foreign Affairs, the European Commission, the UN, different think tanks?

The easiest response, as experienced by the author, is a classic introductory course centred on the great debates, as explained just above. All in all IR remains auto referential and prepares students to become future professors and researchers rather than diplomats. At the undergraduate level, these details may not be important, but at the MA level, where a professor has to speak to a heterogeneous public, the challenge grows. In an MA classroom, the same message is delivered to freshly graduate students, many possessing diplomas in social sciences as well as to older listeners, who come from other domains, perhaps motivated by re-professionalization. For the first category, the professors' discourse seems redundant, uttering a Deja-vu,[4] while the second category one gets an avalanche of new things they may not relate to[5].

[4] From the author's experience, many MA students are former undergraduate who continue at the same university so as to get a master degree. One of the reasons for such continuity is the fact that they are already familiar to most of the topic to be discussed as well as with their professors, so it is easier in this way.

[5] Usually, MA classes take place in the afternoon, when the audience has finished the daily working program. Unfortunately, post 17:00 hours people are tired, eager to go home to their families and justified their unaccomplished tasks for the seminaries either invoking the short time span, either the volume of new knowledge.

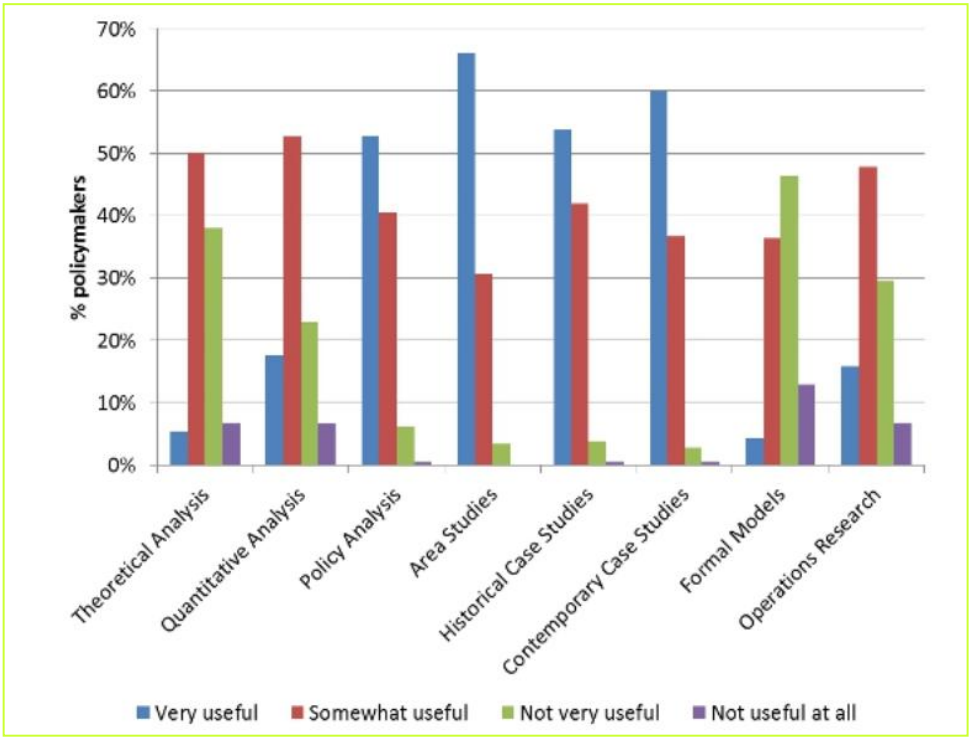

Figure 3: Desch's viewpoint on the field
(Source: Avey and Desch, 13.03.2014)

This comes in a time when several voices accuse the IR community of indulging in a "cult of the irrelevant". According to Michael Desch who coined the expression, scholars in the field have entrenched themselves in methodological intricacies and therefore, cut themselves from the attention of those in power.

Desch's viewpoint may not be shared by everyone, but the bone of contention between practice and school remains, nonetheless (Drezner, 20 Feb 2014).

Given all of the above, teaching international relations as the sociology of elites can provide a common ground for: 1) the different types of students attending classes; 2) bringing academia and policymakers' closer.

Recasting IR in the mould of elite sociology becomes possible because of three reasons:

A. On the one hand, we live in a far more volatile world and institutions account for only a part of the explanation. Both average people who migrate (internally and internationally) and highly educated people who go from one job to the other create a more individualist picture. On the other hand, we live in a more diverse and unequal world than ever before. Even though globalisation lifted tens of millions out of dire poverty, it has also elongated the pyramid of income and created an international group of extremely wealthy people. Such contrast usually falls under the concern of political science and economics and much less under security studies and IR. However, recent decades have shown how financial predicaments and structural wrongs in a society can create upheavals with military and geopolitical consequences.[6]

The 2008 crash, quickly followed by the Arab Spring, demonstrated the long-lasting effects of unchecked financial problems. Since that moment, high profile documents, or public figure taking position grew. In February 2014, James Clapper, Director of National Intelligence, presented the U.S. the annual Worldwide Threat

[6] Even though the security-prosperity nexus rose to the attention after the Cold War, especially for those engaged in post-war reconstruction or employed in one way or another in the problematique of UN (Human Security Now, 2000; Colletta, September 14, 2003), the two fields, security and prosperity are treated differently, each in a different box. Among the efforts to blend them in a unified analytical product we list two such endeavours:

a. "Rebuilding America's Defences", co-authored by a plethora of authors associated with the Washington based neoconservative think-tank on the eve of 9/11, stands among the few non-Marxist papers which considered how the contrast between the haves and the have not is a factor influencing strategic issues (Rebuilding's America's Defences, September 2000)

b. In 2003, the same year when the United States led coalition toppled Saddam Hussein, a little known paper written by the Russian born historic and mathematician Peter Turchin analysed the future of the Saudi nation. Focusing on the looming public debt and the growing number of the Saudi rulling family, Turchin predicted a major crisis should the structural predicament were not dually solved (Turchin, Grinin, Korotaev, 2006). Even though the monarchy survived its inner feuds all these years, 1) this was one of the few recent analysis to marry economic and security issues, and 2) he came very close towards predicting the Arab spring which was caused by similar underneath causes like those anatomised by Turchin.

Assessment of the intelligence community; along usual perennial threats (rogue states, terrorism, cybercrime etc.) growing inequality was also mentioned (Sandhu, 2006; Seaver, September 1, 2015). A more volatile world, like the one we seem to be living in, is described more by process and less by structure. Elites, be they political, economic and even cultural become the intermediate factor blending the two categories. An elite centred sociology might cluster under its grasp many other topics which are usually taught separately thus highlighting a red thread easier to understand by the students. At the same time, such an approach could also prove useful for intelligence studies by bringing them closer to the IR mainstream and fill the hiatus James Der Derian was talking about at some point (Der Derian, 2002; Der Derian, 2009; Matey, May 2005; Tănase, 2015, p. 142-146; Sam, fall 2018).

B. Elites amidst conflicts of interest. The last decade saw the public space rattled by a cascade of scandals with political elites in their midst. From the arrest of Dominique Strauss-Kahn in May 2011, continuing with the Panama papers (perhaps the largest of them all) and ending with Trump-Biden-Ukraine affair one can ask if all these remain disparate events exploitable for media sensationalism or reveal deeper patterns. Could they be considered a struggle between the style of a neopatrimonial class and the constraints of the Weberian bureaucracy requesting the clear separation of private and professional roles?! Whether the claim is valid or not, it might serve as the starting point for an IR course.

C. IR literature has moved from the institutionalism of the 1970s-1980s to approaches more sensible to methodological individualism: constructivism, discourse analysis, area studies, rational actor theory, discourse analysis, network analysis. In one way, the discipline goes forward by moving back from Kenneth Waltz's 1979 *Theory of International Politics* to his 1959 *Man, State and War,* where the individual level is taken into account (Waltz, 1954/2001). Otherwise put, IR has moved unintentionally closer to becoming the sociology of elites!

The design of a class or even an entire IR curricula based on the sociology of elites need not start from scratch; it should rather build on the work already done by several authors:

- Henry Kissinger's successive books about diplomacy stretch a line from biography towards autobiography. Written in Carlyleian terms[7] with focus on the figures of brilliant diplomats who struggled to push through le raison d'état, Kissinger oeuvre evolves up until he adds his own deeds to that lineage. Combining academic with controversial public persona, the former US state secretary compels us to assess the optimum distance IR should have towards policymaking so as to remain a dispassionate science.[8]

- Bastiaan van Apeldoorn, professor at the Vrije Universiteit Amsterdam (https://research.vu.nl/en/persons/bastiaan-van-apeldoorn) is associated with the so called Amsterdam school[9]. His research about transatlantic elites charts the career pathway of many high profile US technocrats and policymakers such as Condollezza Rice and Robert Gates. Writing from an economic materialist perspective, Apeldoorn's analysis entails the promise than can be developed further. (Apeldoorn, de Grraf, 2014, p. 29-55; Apeldoorn, 2014; Apeldoorn, 2016; Apeldoorn, 2018, p. 113-131)

- James Der Derian, professor at the University of Sydney embeds dresses research themes in postmodern garb. His abbreviator notion called MIME-net opens the traditional statist black box to investigate the relationship between media, the entertainment industry and the military-industrial complex. A neighbour, ancillary notion apart from MIME is what Der Derian calls "virtuous war". A play on words combining virtuallity with virtue, virtuous warfare describes what other authors' identify as post heroic conflict – a manner to defeat your

[7] Thomas Carlyle (1795-1881) was a Welsh historian and polymath associated with the Grand Man Theory – according to which history is written by great personalities, therefore historiography should follow suit and disregard other factors shaping the events. Less remembered is his penchant to see individuals instead of masses (Rumpca, 1988; Sherman, 2010). It remains to be seen if an elite-centric IR theory will resurrect Carlyle's methodological legacy or not.

[8] For associations between Henry Kissinger, diplomacy and Thomas Carlyle style of historiography see: (Weisberger, June 20, 1974; Starr 1984; Hughes, 2006; Singer, April 26, 2007; May 11, 2020) For praises and controversies surrounding the former top diplomat see apart from the sources quoted above: Thomas Meaney, The Myth of Henry Kissinger, *New Yorker*, May 11, 2020.

[9] For details about the Amsterdam School do see: (Apeldoorn, 2004, p. 110-112; Jessop, Sum, 2017, p. 342-354; Jessop, 2019).

enemy from afar using the latest of technologies. Short of soldiers and with low tolerance towards causalities, affluent (usually) Western nations prefer to fight asymmetric hostiles via drones and satellite guided missiles. (Der Derian, 2000, p. 771-788)

- Chrystia Freeland's Plutocrats volume is a sociologic travelogue which combines face-to-face interviews and statistics to capture the league of the 1%-ers (Freeland, 2012). Although not an IR book per se, it calls for reflection about the extent to which massive economic inequalities bear impact on politics. The work done by Freeland is far from solitary. Aware or unconscious heir to Thorstein Veblen's Consicuous consumption and C. Wright Mills Power elite theories, several others have found in writing about present rising inequalities a meaningful pursuit (Haseler, 2000; Nowell, 2004). Also, Freeland, a journalist turned minister in Justin Trudeau's government provides a second example about combining writing with practice, apart from Henry Kissinger's earlier one.

- Andrés Solimano, Chilean US educated author, has also written several papers on the mobility of elites and completes Freeland research interest (Solimano, Avanzini, 2010; Solimano, 2014).

- Lisa Dellmuth is Associate Professor of International Relations at Stockholm University and her research interests grapples with the "legitimacy and redistribution in global governance, with a particular focus on the European Union"; she has also led a 5-year research project about climate governance and is involved with different journals. She wrote several articles about the manner in which elites engage in public communication when dealing with international organisations (Dellumuth and Tallberg, 17 February 2020).

- Inderjeet Parimar, professor at the University of London, wrote intensly about the network between scholars and epistemic communities (Parmar, 2004; Parmar, 2012; Wertheim, Tournès, Parmar, November 2018, p. 727-733; Bhatnagar, 2021), a type of inquirer useful for the self-reflection of IR caught between spectatorship and performative action engaged in policymaking.

- International law is another strand amenable to be studied from an individual/elite-centred perspective. The progress of international legislation meant the growing dehyphenation between

citizenship and moral responsibility. Whereas the Westphalian model in its stance did not allow any arbiter beyond its authority, today there is mounting pressure for the return of neomediavalism with regard to international relations so as to legally punish individuals charged with crimes against humanity. Expanding the effort made by the Nürenberg tribunal, this change aims to restore justice in dossiers like the civil wars in former Yugoslavia, Rwanda or Sierra Leone. Judith Armatta or Simona Ţuţuianu are among the authors requesting changes in the Westphalian perspective so that governments should become more morally responsible with regard to their subjects wellbeing. (Armatta, 2010; Ţuţuianu, 2007, p. 69-72; Ţuţuianu, 2011)

Now that we have highlighted the potential roots of an elite-centered educational program, we are left with the design per se. Two ideal paths will be pondered in what follows:

a) a professor-centred class;

b) a student-centred class.

The first term of each case makes the rules and charts the way forward. According to the first possibility, the syllabus must begin with a very thorough definition or acception about what the elite is. In the second scenario, the definition is loose enough to have a starting point, but the meat on the bone remains within the obligation of the classroom. Once established, it shall be tested all across the semester against different case studies. A sub scenario to this (called b.1) asks the classroom to be divided into several teams (the number allowing) with each of the teams generating a definition of its own. Thus, seminars will become a Darwinian laboratory for competing views giving the attendants a wider space for manoeuvring.

We can imagine a second hybrid sub scenario (called b.2) in which the professor shall provide a pivot definition and the classroom shall be invited to come up with its own alternative definition(s).

This method is inspired by a workshop held by Randy Pherson and was used by the author several times during seminars with senior students. In their cases, the method was especially successful when trying to define hybrid warfare or when crafting a country brand. Such approach allows improvisations. For example: during one seminar, the author saw a student who was reading Immanuel Kant and asked him

to use Kantian terminology for the task prior assigned to his team. Even though as first the students seemed aloof and absent, he found the exercise fruitful.

Scenario a) bodes well to a class full of beginners, either at the undergraduate or at the MA level. Starting from the premises that they do not possess strong opinions about IR, nor extensive knowledge on the literature in the field, it is recommended that the syllabus provide strong and clear guidance from the start. Otherwise, if they had already attended an introductory course, then scenario b) comes in. This latter matter can aid in dealing with students who are intelligent, bookish albeit rebel and individualistic.

Bellow we chart the structure of a course with seven lectures and their subsequent seminars:

Lectures:

I. Introductory class. Different definitions of elites: Pareto, Michels, John A. Hobson, Antonio Gramsci, C. Wright Mills, Robert Dahl, William Domhoff, the Amsterdam School. The necessity of an elite focused IR.
II. Plutocracy and democracy. International growth of inequalities and impact on politics and social phenomena. The rise of anti and alter globalist movements.
III. The EU as test-case for an elite focused IR. National elites and eurocrats in pushing forward the maintenance of the Union.
IV. Euro-American transnational class. The reproduction of elites on both sides of the Atlantic.
V. Post-soviet elites. Personal and institutional bonds between the Russian Federation and the former Soviet republics.
VI. International organisations and the role of elites.
VII. The growing role of high profile individuals in shaping the global agenda.

Seminaries:

1. Readings from different thinkers on power and elites:

- Charles Wright Mills. (1960). *The Causes of World War Three*, Balantine Books;

- Roberto Michels. (2001). *Political parties. A sociological study of the oligarchical tendencies of modern democracies*, translated by Eden and Cedar Paul, Batoche Books, Kitchener;

- G. William Domhoff, Who Really Ruled in Dahl's New Haven? https://whorulesamerica.ucsc.edu/local/new_haven.html

- Bastiaan van Apeldoorn, and Naná de Graaff. (2014). Corporate elite networks and US post-Cold War grand strategy from Clinton to Obama, *European Journal of International Relations*, Vol. 20(1) 29–55;

- Mikael Rask Madsen. (2016). Transnational Fields and Power Elites: Reassembling the International with Bourdieu and Practice Theory, *iCourts Working Paper Series*, No. 46.

2. The importance of studying whether the super-rich are only a statistical group or really represent a self-aware group reinforced by personal bonds:

- Chrystia Freeland. (2012). *Plutocraţii*. *Ascensiunea noilor superbogaţi ai lumii şi declinul tuturor celorlalţi*. Polirom, Bucureşti.

Given the fact that the Canadian writer employees as theoretical background Alfred Marshall and Robert C. Merton, it might be of service some papers of them.

3. The EU – an evolving construct bustling with people and institutions

- Walter Carlsnaes, Helene Sjursen and Brian White (eds.). (2004). *Contemporary European Foreign Policy*, Sage Publications, London, California;

- Asle Toje. (2009). Strategic *Culture as an Analytical Tool History, capabilities, geopolitics and values: the EU example*, in *Western Balkans Security Observer*;

- Niilo Kauppi, Mikael Rask Madsen (eds.). (2013). *Transnational Power Elites: The New Professionals of Governance, Law and Security*, Routledge.

It can further be discussed whether the EU represents a win-win set-up or a win-lose core-periphery project blaming Western countries for losing the colonial empires. The discussion can be nourished using articles from the Romanian press and commenting on them.

4. Meeting points and collective habits of elite reproduction across the Atlantic

- Stephen M. Walt. (December 1, 1998). *The Ties That Fray: Why Europe and America are Drifting Apart*. In *The National Interest*;

- Andrés Solimano and Diego Avanzini. (2010). *The International Circulation of Elites: Knowledge, Entrepreneurial and Political*, World Institute for Development Economic Research, Working Paper No. 113.

5. The Russian world – real affinities or just common interests?

- Vladimir Gel'man, Inessa Tarusina. (2000). *Studies of political elites in Russia: issues and alternatives*. In *Communist and Post-Communist Studies*, No.33, 311–329;

- Diana Digol. (March 2007). *Emerging Diplomatic Elites in Post-Communist Europe*, Thesis submitted for the assessment with a view to obtaining the degree of Doctor of Political Science and Social Sciences at the European University Institute;

- Alexander Nikitin*. (*February 2007*). The End of the 'Post-Soviet Space'.* The Changing Geopolitical Orientations of the Newly Independent States, Chatam House;

- Martin Müller. (2009). *Making Great Power Identities in Russia. An Ethnographic Discourse Analysis of Education at a Russian Elit*e University, Lit Verlag GmbH & Co. KG Wien;

- Horak, Slavomir. (2012). *The elite in post-Soviet and post-Niyazow Turkmenistan: does political culture form a leader*? In *Demokratizatsiya*, vol. 20, no. 4;

- Dr. David Lewis. (2016). *The 'Moscow Consensus': Constructing autocracy in post-Soviet Eurasia*. The Foreign Policy Centre, May 24, 2016;

- Akbar Valizadeh, Shiva Alizadeh. (winter 2019). The Socialization of Post-Soviet Elites and Russia's Regional Hegemony, *Central Asia and the Caucasus Journal*, Volume 24, Issue 104, 154-186.[10]

[10] Martin Müller is probably the most appropriate to be studied under the logic of the course as he depicts an inside study of MGIMO, the Russian institute bent on preparing the future political bureaucrats and which counts among the alumni not only high-profile Russians, but also policymakers from other Central and East-European countries. The article of Valizadeh and Alizadeh was written in Persian and read using Google translate. Its presence here can be explained by the desire to guest not only pieces written in universal languages, but also narrow vernacular ones and thus as an invitation for those students who possess skills in rare languages to come forward and enrich the seminars.

6. International organisations – between a life of their own and the resources given by national governments

- John J. Mearsheimer. (Winter, 1994-1995). The False Promise of International Institutions. In *International Security*, Vol. 19, No. 3, pp. 5-49;

- Catherine Welch, and Ian Wilkinson. (5-7 September 2002). The political embeddedness of international business networks", Competitive paper presented at 18th Annual IMP Conference, Dijon;

- Catherine Welch, Rebecca Marschan-Piekkari, Heli Penttinen, Marja Tahvanainen. (2012). *Interviewing elites in international organisations: a balancing act for the researcher*. http://observatory-elites.org/ wp-content/uploads/2012/06/Interviewing-elites.pdf

- Mikael Rask Madsen and Mikkel Jarle Christensen. (26 October 2016). *Global Actors: Networks, Elites, and Institutions, Oxford Research Encyclopaedia*. https://oxfordre.com/politics/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-9

- Henning Schmidtke. (2019). Elite legitimation and delegitimation of international organizations in the media: Patterns and explanations, *The Review of International Organizations*, 14:633–659.

Concluding remarks

Since the beginnings of the first chairs of International Relations, the domain has grown diverse and eclectic, both on the side of the offer, as well as on the consumer. After a century of soul searching and bouncing between scientific endeavour, counselling princes and outright engaging politics, it is possible that the domain has lost its unity due to too much unbridled diversity. Starting from the lack of a unique name of the field to the diversity of those teaching it and the dissimilarity of the students, we witness a proteic stage where one is not such the actors follow the same script or at least the same language. The catechism of teaching IR following a presumably taxonomy of feuding schools remains relevant for the scholars, but not to the multifarious candidates who usually enrol IR classes with vague but glamorous expectations about a future diplomatic career or else. Blending study with the experience of teaching, this article suggests crafting IR more like an elite centred sociology more than a paradigm-centred one.

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REVIEWS AND NOTES

DESPINA STRATIGAKOS, HITLER'S NORTHERN UTOPIA. BUILDING THE NEW ORDER IN OCCUPIED NORWAY
Princeton University Press, 2020, 313 p.

Review by Lars BAERENTZEN*

Despina Stratigakos is a professor of architecture at the university in Buffalo, New York. Her new book, *Hitler's Northern Utopia*[1], is an account of Norway during the Second World War. The book is based on a comprehensive study in the archives and it makes available many hitherto unknown details. Very thorough notes leave the reader in no doubt about the sources – and they are, at the same time, a key to the most recent research both in Norway and internationally.

The book opens with Hitler's voyage at sea to Norway in April 1934 on board the pocket-battleship Deutschland in the company of Admiral Raeder and Colonel-general von Blomberg. The ship entered the Sogne Fjord at 07.30 am, on April 12, "in exceptionally beautiful weather" and stopped briefly at Balestrand, where the Emperor Wilhelm II in the summer of 1913 as a present to Norway erected a statue of the Viking hero Frithiof. Stratigakos makes use of Norwegian and German press accounts – and the pictures taken by the photographer Heinrich Hoffmann – to present a main theme of the book: Hitler's personal enthusiasm for Norway as an important centre of the "Nordic race".

When the war broke out in 1939, Admiral Raeder was quick to suggest getting bases in Norway for the great fleet he was planning. The

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[1] This review was previous published in Danish in *Krigshistorisk Tidsskrift* (*Journal of War Studies*) on February, 2021.

voyage in 1934 seemed idyllic – but the book reminds us that quite possibly it was on board the Deutschland that Hitler planned the "Night of the Long Knives" which happened shortly after, on June 30, 1934 – (an event which provided an early success for the Polish code breakers, viza deciphered Enigma message "to all airfields. Röhm must be brought here, dead or alive").

Before the war in Norway had ended with a German victory on June 10, 1940, Hitler had already named the veteran Nazi from the Ruhr area, Josef Terboven, as "Reich Commissioner" in Norway. Together with von Falkenhorst, the military Commander, it was his task to change Norway into an ideal Nazi community – and at the same time, if possible, make the Norwegians into friends of Germany (as Hitler is said to have told Terboven when he gave him the title on April 24).

In Denmark, we are used to thinking of "Conditions in Norway" and "Conditions in Denmark" as two very different things. (Actually, a book under this title was published in 2010[2]) Stratigakos' outstanding book illustrates clearly and informatively just *how very* different these conditions were – if only by the fact that Quisling and his Nazi *Nasjonal Samling* became the civilian Norwegian authority with whom Terboven and the Wehrmacht were going to cooperate.

Stratigakos shows in many different areas, how this cooperation in practice happened – and that it presented other problems that those encountered by the Germans in Denmark. In Berlin, the aim was to build up Norway as a base for German Uboats and aircraft and to make it a strong fortress able to withstand the expected British attacks. At the same time, Berlin aimed to create an ideal Nordic Nazi society that, incidentally, should become part of the German "Grossraum" – after the expected victory – equipped with a German-planned and German-populated town with living space for those who were to work at the large naval base and its associated shipbuilding yard. Furthermore, the intention was that this town should become the northernmost in a series of "culture-cities" in the Greater German Reich.

It was a problem for Hitler and for the local German leaders in Norway that this vision did not correspond to the wishes of Quisling

[2] *"Conditions in Denmark"* 1940-45. Hans Fredrik Dahl, Hans Kirchhoff, Joachim Lund & Lars-Erik Vaale. København 2010.

and his supporters. Therefore, the final aim had to be kept secret – even though the preparations of course were large-scale and very costly. The Norwegian infrastructure (roads, railroads, power stations, airfields) was greatly strengthened. That created full employment, but in addition the Germans used many thousands of slave-workers (especially Russian and Yugoslav prisoners-of-war). These were guarded in part by Norwegians, and thousands died during the work.

Because the buildings plans in Norway had such a high priority for the inner circle in Berlin, they became the object of a bitter internal power-struggle about who was going to control the development – and get control of those large resources which were needed. The personal involvement of Hitler made this power-struggle constant and relentless. Stratigakos shows how Terboven and his "Reich Commissariat" in Oslo was one pole, and the Wehrmacht chiefs in Norway were another. Terboven was interested in having competent Norwegian specialists becoming involved, and some Norwegians wanted the same.

One of the interesting "case-studies" in the book deals with the creation, as early as June 1940, of the purely Norwegian organization "Brente Steders Regulering" (Burnt Sites Redevelopment). A large number of towns (about 14.000 houses) were burnt down during the fighting between April 9 and the beginning of June. A well-known Norwegian town planning expert, Sverre Pedersen, from the Technical University in Trondheim managed to collect a large group of Norwegian architects who were to take care of the restoration work. The Germans – Terboven and his people – were in a way positive, but could they be sure that this group would be able to create the right German style in design and town planning?

Now enters a new player: Albert Speer with his extreme ambitions and his wish to control all (important) building activity in the Third Reich by using his personal relation with Hitler. Both with regard to the "Burnt Sites Redevelopment" and with regard to the planning of an ideal town at Trondheim, Speer succeeded in getting the upper hand over Terboven and his Oslo-based German civil servants. Stratigakos shows with merciless clarity how Speer used every method to get his way. Her picture of his cold efficiency is precisely in accordance with the impression one gets from the comprehensive biography of Speer

which professor Magnus Brechtken published in Munich in 2017 (one of the few relevant books not cited in *Hitler's Northern Utopia*).

Speer used many kinds of method, also flattery and apparent friendliness. For instance, he invited the above-mentioned Norwegian group of architects led by Sverre Pedersen in November 1940 on a luxurious visit to many cities in Germany where they were everywhere received with honour – in Munich they were even received by Speer's rival, the architect Herman Giesler, also an ardent Nazi, to whom Hitler had entrusted the development of "die Hauptstadt der Bewegung". For her brilliant description of this journey Stratigakos has used, among other sources, Sverre Pedersen's personal notes from the visit, which are still preserved in Trondheim. In his speech to the Norwegians, Geisler quoted the words of Aristotle about "the purpose of the Greek polis: to make the citizens secure and happy."

Just like Speer, Terboven was also a seasoned power-player with access to the inner circle (he had married Goebbel's former secretary), and it was Terboven himself who in August 1940 asked Speer to take care of the general oversight of the reconstruction in Norway. Speer was pleased to let the local Germans in Oslo do the considerable preparatory work which Stratigakos describes in such a way that the reader clearly feels that the special field of the author is architecture. But the task of designing the important new town at Trondheim – that was something Speer wanted for himself. In the spring of 1941 Speer wrote to Terboven that Hitler had given him full powers to "create a new town at Trondheim". He also wrote that the final location probably could be only decided by a personal visit by Hitler. This did not happen. Speer decided that he should travel to Norway – but Hitler ordered the visit to be cancelled at the last moment giving as a reason that it was still too unsafe to travel in Norway. As Speer wrote to Terboven, "I am indispensable for him".[3]

The final decision about the location of the ideal city just west of Trondheim was made by Hitler in person on June 21st 1941 – that is, on the day before the attack against the Soviet Union ("Barbarossa") was

[3] "Unfettered by modesty" is the apt comment in the book. It also mentions that Norwegian saboteurs had been very active in the days before Speer's planned visit, "perhaps prompting Hitler's reluctance to let him go".

opened very early next morning. This took place at a meeting with Speer and Admiral Raeder (whose fleet had recently lost one of its super-battleships, Bismarck, while the other, Tirpitz, only on January 16 arrived off Trondheim.)

Militarily, Norway continued to have great importance, especially for the German Uboat-warfare. The defensive build-up of the Atlantic Wall demanded great resources and many soldiers. Stratigakos notes Hitler's great sensitivity with regard to an Allied landing which on several occasions made him send more troops to Norway.[4] Hitler also long continued to demand that work on the new Trondheim be carried on – a demand that he did not abandon until after the defeat at Stalingrad.

Stratigakos writes in particular about the consequences for the German building activity in Norway, including the building of "Soldiers' homes". The book has an interesting chapter about these under the title "Islands of Germanness". The Army leadership was aware of the need to counteract loneliness and depression among the soldiers, and many large "Soldiers' homes" were planned in which a "homely German atmosphere" was aimed at. Several were indeed built and some even exist today. Stratigakos shows with many photos that the wish to create a homely and very German atmosphere (as in a local inn) succeeded quite well.

The "Soldiers' Homes" were run by German women volunteers who were supposed, for instance by cooking, to make the soldiers feel at ease. But when German soldiers began to invite their Norwegian girlfriends to the Soldiers' Homes, the Commander-in-Chief, von Falkenhorst, put his foot down: he forbade Norwegian women entry using the argument that this would mean that the volunteer German women would have to wait at table for Norwegian women, and he saw that as an inacceptable affront to the German women.

[4] The British exploited this anxiety in three large-scale "deception-plans", in which notional attacks against Norway were used to deflect attention from real attacks against other targets. There was, however, also a real British plan for an attack against Trondheim, put together on Churchill's direct order in October 1941. According to British generals, Churchill, too, was "obsessed with Norway" and he never stopped talking about attacking there: "Merely the sight of a map of Norway was enough to make him begin again".

German soldiers in Norway were not always lonely, as Stratigakos shows in a section dealing with the roughly 12.000 children who were born by Norwegian women to German fathers. At the Liberation in 1945 there were more than 500 children in so-called "Lebensborn" homes in Norway, and it is a bitter irony that many of these "Aryan elite children" after the war without any evidence (as the book shows) were considered to be mentally retarded.

In the book Stratigakos speaks about many well-known Nazis seen from an angle that is not so common. This is true for Terboven and those working in his administration in Oslo and also for Speer and his close collaborators. In this book one meets them *also* as hard-working and efficient people whose work is of course influenced by rivalry, but maybe not more so than is commonly seen among very ambitious people. The explanation is – of course – that this book to a large extent builds on contemporary documents in which individuals themselves discuss the technical or practical problems which they are engaged in solving. They did not often write to one another about the brutal cruelty shown towards Norwegian resistance fighters and Norwegian Jews, and they talked as little as possible about the many thousands of prisoners-of-war whose labour was cruelly exploited to build the roads and the buildings which the Germans needed.

The author is well aware of the dilemma that can be created from building a large part of the text upon contemporary sources. This she states clearly and beautifully in words that deserve to be quoted: *"... these sources are distinctly one-sided, giving voice to German illusions and ambitions. This book thus should not be read as a general or balanced history of the occupation. Rather, the Norway envisioned by the Nazis and explored in this book is a fantasy and a dangerous one"* (Italics in the original).

The concluding chapter of the book is named "Conclusion. Ghosts in the landscape." Here Stratigakos explains how the many consequences of the Occupation have been handled by Norway in the years since the war. This includes the treatment by the Norwegian State of some of the citizens who "failed" during the Occupation. Much of this is not pleasant to read, but it is not unknown in more recent Norwegian historiography to which the book is a good guide. A well-known

example is the brutal treatment of the children born by Norwegian mothers with German soldiers as fathers. A perhaps less well-known example is "Operation Asphalt" in the summer of 1951 when the Norwegian Government – now a member of NATO – "quietly and hurriedly" began to move 95 Soviet war cemeteries in the northern provinces to the remote island of Tjötta. Many local memorial stones were also removed in spite of protests from local Norwegians who remembered the suffering of the prisoners. But Norway wanted to avoid visits by Russians who wished to remember the dead and perhaps had other reasons for their visit.

The reader gets an enormous amount of information about Norway in this beautiful and well-written book. Professor Stratigakos deserves much gratitude **for a book which combines clear-headed precision and richness of detail with an understanding for the human cost of history**.

ACADEMIC FOCUS

Strategic partnership project within
ERASMUS+ Program
AGREEMENT No. –
2018-1-RO01-KA202-049449

MIND THE GAP IN MEDIA COVERAGE AND STRATEGIC COMMUNICATION IN CASE OF SECURITY THREATS – THE DEVELOPMENT OF CRITICAL THINKING AND RESPONSIBLE REACTION
(October 1st, 2018 – August 31st, 2021)

CRESCEnt project addresses the challenge of social polarization created by the propagation of disinformation and fake news. It is a proven fact that fake news have created in Europe, and in the three countries participating in the project, an acute miscommunication and lack of trust between the two targeted professional categories. As the media has been pressed into reaching large audiences, institutional spokespersons were forced into communicating what is necessary and not divulging aspects which could jeopardise security investigations and public safety. A gap of trust and efficient communication was, thus, created and later on widened by the phenomenon of fake news. While it is indeed the media professionals that shape the way information is delivered to the public, they themselves might get trapped in particular "narratives" and share common mental frames. Recognizing that the media professionals are themselves the locus of potential influence by external actors is crucial to developing strategies to combat misinformation and hostile influence. CRESCEnt aims to address this divide through innovative solutions and multiplication of best practices of both spokespersons and journalists.

CRESCEnt project creates a training platform and a set of communication and cross-sectorial strategic communication instruments, which aim to capacitate institutional spokespersons and journalists from security and LEA fields, in order to use media reporting to the public in a conscious and ethical manner. CRESCEnt's main target group consists of spokespersons in the field of national security and

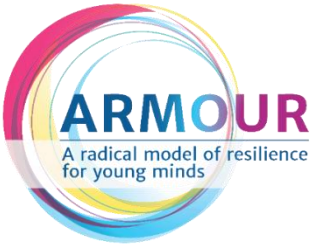
LEAs. The secondary group is represented by (young) journalists who are active in the field of security.

Participating organizations are: "Mihai Viteazul" National Intelligence Academy (MVNIA) – Romania; University "Rey Juan Carlos" (URJC) – Spain; Kentro Meleton Asfaleias (KEMEA), Centre for Security Studies – Greece; Ministry of Internal Affairs, Directorate for Information and Public Relations (MAI-DIRP) – Romania.

Objective of the project are:

- to develop a toolkit of techniques, methods and instruments for institutional spokespersons and journalists who communicate on issues related to security and law enforcement, as support in their professional activity;
- to enhance key-competences and skills of the spokespersons and journalists so that they become resilient to fake news, build an ethics of reporting, perform double fact checking, provide and obey ethical grounds in handling sources, report security threats and handle truth for the preservation of democracy and the rule of law.

The CRESCEnt project is part of the ERASMUS+ program and it is funded by the European Commission. See more about the project on the official website: https://crescentproject.eu.



A RADICAL MODEL OF RESILIENCE FOR YOUNG MINDS – ARMOUR
Grant Agreement No. 823683
(January 1st, 2019 – June 30st, 2021)

The Euro-Arab Foundation leads ARMOUR (*A Radical Model of Resilience for Young Minds*) consortium and the project aiming to address the social polarization caused by the adoption and spread of extremists ideologies by creating an interdisciplinary learning model that helps individuals and communities develop resilience to the specific ideologies and behaviours of violent extremism. The ARMOUR's consortium, led by the Euro-Arab Foundation, is also made up of the Centre for Security Studies – KEMEA (Greece), the "Mihai Viteazul" National Intelligence Academy (Romania), SYNYO GmbH (Austria), the Italian Ministry of Justice, Agenfor (Italy), LIBRe Foundation (Bulgaria), the University of Malta (Malta) and the University of Groningen (Netherlands).

ARMOUR Project aims to address societal polarization via strengthening resilience of individuals, communities and vulnerable groups (such as children, youth etc.) to polarisation, and to promote interaction and cooperation between different local actors from public sectors, i.e. law enforcement, social services etc., that specialise in working with vulnerable groups in preventing extremism through development of cooperation models. The project will design and create a Toolkit for first-line practitioners to employ in reducing polarization among children and youth.

The Toolkit, capitalizing on previous work carried out by project partners, takes the form of experimental laboratories (experimental labs) which together work towards: strengthening individual capacity to resist push and pull factors of radicalization; creating community empowerment and resilience to social polarization and violent extremism and assisting states deploy proportional responses against

provocations and latent conflicts. The model will then be promoted through a social media campaign.

The expected impact of the project covers the following aspects:

- Increasing awareness and capacity of first-line practitioners: ARMOUR achieves this through the experimental labs and the related training programme. The first tool will help practitioners better understand and identify instances of radicalization and polarization among children and youth while the second one will help them improve their ability to use the project toolkit;
- Promoting interaction and cooperation among different stakeholders: ARMOUR achieves this by organizing the experimental labs in which practitioners and members of vulnerable communities have trusted interactions;
- Promoting the views of moderate voices by engaging with the silent majority and integrating them into the experimental lab;
- Developing and promoting concrete tools targeting vulnerable groups: the experimental lab combined with the best practices identified in the project and the online campaign are concrete tools which key actors can use when working with vulnerable youth.

The project is financed by the Internal Security Fund, a funding package of the Directorate-General for Home Affairs (European Commission) to promote the implementation of the Internal Security Strategy, law enforcement cooperation and the management of the Union's external borders. See more about the project on the official website: https://armourproject.eu/a/privacy-policy.

Education, Scholarships, Apprenticeships and Youth Entrepreneurship Programme in Romania, funded by the EEA Grants – Financial Mechanism 2014-2021
Agreement no.: 18-COP-0017
(October 1st, 2019 – March 31th, 2022)

THESEUS Project aims at Connecting the Disconnections between Disparate Data, in order to provide knowledge for building Insightful Analysis. The broad availability of data has led to increasing interest in methods for extracting useful information and knowledge from data, determining the emergence of new fields of science (e.g. data science). At the same time, big data algorithms have been signaled as a potential leverage that can lead to digital dictatorship if insufficiently understood, poorly handled and unethically regulated. Companies in every industry focused on ways to structure, process and analyze the growing volume and diversity of data so as to streamline decisions and gain a competitive edge. State institutions, regular citizens, social and political science practitioners on the other hand, are not yet properly equipped to properly mitigate the economic, social and political impact of the information technology revolution that awaits us in the decades to come. Therefore, in the process of understanding and mitigating risks and opportunities of Big Data, complex workloads, new skills and competences have to be acquired.

Following these emerging needs, the **objective of the project** is to enhance human capital and knowledge base by tackling directly skills and competences required and providing an understanding of the

processes guiding big data analytics. This objective will be met by **building and delivering a course**, consisting of four modules, capitalizing on big data methodologies: introductory module, data collection module, data processing module and data analysis module.

The course will not be designed as a technologically focused course, but rather knowledge, awareness and understanding focused course. The course avoids an algorithm-centered approach. It focuses on how options are understood and choices and tradeoffs are designed. Thus, it enhances, through learning by doing, key-competences and skills required in collecting, understanding, correlating and processing big data, helping them streamline problem-solving processes in a data-driven ecosystem.

The project addresses **two professional categories:** *governance and social scientists* and *national security practitioners*, whose complementary work is of paramount importance in insuring the sustainable development of democracy. Both categories carry out great responsibility at social level. Ill-informed decisional processes in national security and policy-making, based on incomplete, inaccurate or incorrectly correlated data generate negative impact, affecting society at large. Although practitioners targeted by the project work with large amounts of data, their background is mostly in social science or security studies, lacking a very specific technical training. Such (future) professionals need to better understand what and how big data can be capitalized so as to ethically and lawfully improve the overall efficiency of their organization.

Participating organisations are: "Mihai Viteazul" National Information Academy (ANIMV) – Romania; University of Malta (UoM) – Malta; Norwegian University of Science and Technology (NTNU) – Norway; National University of Political Studies and Public Administration (SNSPA) – Romania. THESEUS Project is part of the Education, Scholarships, Apprenticeships and Youth Entrepreneurship Programme in Romania, being funded by the EEA Grants – Financial Mechanism 2014-2021.

Empowering a Pan-European Network to Counter Hybrid Threats (EU-HYBNET)
H2020 Grant agreement no: 883054
(May 2020 – April 2025)

EU-HYBNET is a 60 month project (2020-2025), financed through the Horizon 2020, which will start in May 2020. The project is being developed and implemented by a consortium of 25 partners, coordinated by LAUREA University of Applied Sciences from Finland. The European Centre of Excellence for Countering Hybrid Threats and the Joint Research Centre are leading partners of the EU-HYBNET project.

EU-HYBNET will bring together practitioners and stakeholders to identify and define their most urgent requirements for countering hybrid threats, by undertaking an in-depth analysis of gaps and needs and prioritizing those that are crucial to address through effective research and innovation initiatives, including arranging training and exercise events to test the most promising innovations (technical and social) which will lead to the creation of a roadmap for success and solid recommendations for uptake, industrialization and standardization across the European Union.

The project aims to build an empowered, sustainable network, which will:

- define common requirements that can fill knowledge gaps, deal with performance needs, and enhance capabilities of innovation endeavors;
- monitor significant developments in research and innovation;
- deliver recommendations for uptake and industrialization of the most promising innovations that address the needs of

practitioners, and determine associated priorities for standardization;
- establish conditions for enhanced interaction among its members;
- persistently strive to increase its membership and continually build network capacity through knowledge exchange.

EU-HYBNET will address four core themes to ensure coherence in the project's results: 1) Future Trends of Hybrid Threats, 2) Cyber and Future Technologies, 3) Resilient Civilians, Local Level and National Administration and 4) Information and Strategic Communication.

Romania represents the consortium through "Mihai Viteazul" National Intelligence Academy (MVNIA). MVNIA will incorporate the project's research findings and information into its MA & PhD research programs. As students come from diverse areas (security practitioners, legal, media, private business), the impact of exploitation of the information will reach a wide audience, and the EU-HYBNET training documents will also be employed to enhance capabilities of experts and practitioners in the fight against hybrid threats.

EU-HYBNET is a Pan-European network of security practitioners, stakeholders, academia, industry players, and SME actors across EU, collaborating with each other to counter hybrid threats.

With the support of the Erasmus+ Programme of the European Union

EUSEGOV
Jean Monnet Module
621227-EPP-1-2020-1-RO-EPPJMO-MODULE

Jean Monnet Module EUSEGOV

A common understanding of EU Security Governance.
Teaching and researching the EU security policies and institutions
for a better academic and professional approach
in the security and intelligence field
(October 21st, 2020 – October 20th, 2023)*

"Mihai Viteazul" National Intelligence Academy (MVNIA) implements a three year Jean Monnet Module grant: **EUSEGOV** – *A common understanding of EU Security Governance. Teaching and researching the EU security policies and institutions for a better academic and professional approach in the security and intelligence field*. The EUSEGOV module focuses on EU Governance, a subfield of EU studies that has received less attention comparatively with the study of other EU related issues. The module aims at educating students and at equipping them with the knowledge and necessary skills to become EU citizens and better security providers. The academic value of the EUSEGOV module is to deliver courses on EU Security Governance for security and intelligence studies students. The courses tackle specific aspects of EU integration studies: *Introduction to EU Security Governance and Strategic communication in EU Security Governance.*

The **specific objectives** of the Module are:

- Providing a coordinated series of MA compulsory and PhD summer courses aiming to familiarize students with the main

* This Project has been carried out with the support of the Erasmus+ programme of the European Union. The content of this Project does not necessarily reflect the position of the European Union, nor does it involve any responsibility on the part of the European Union.

trends and approaches in the field of communication and security governance in the European Union.

- Updating the teaching contents on the topic by research activities.
- Making aware students who do not automatically come into contact with EU studies of the importance of security governance by training them in using both the specialized language and methodology specific to subjects that pertain to the area of international relations, political sciences, as well as security studies.

The module's objectives will be achieved through the **teaching, researching and promoting** activities. To this respect, the EUSEGOV module includes a **two completely new courses**, one compulsory for MA students and one optional for PhD students, covering a major gap in the curricula i.e. the developments in the idea of European Security Governance. By bringing together academics and experts from various fields of knowledge, from civil society organizations and institutions, the interdisciplinary teaching and research approach of this Module provides the students with an in-depth and systematic understanding of key EU Security Governance topic. The EUSEGOV includes also research activities on the **Strategic communication in EU Security Governance thematic**. The research report will contain an extensive analysis of three aspects: *Strategic communication in EU – practices and official documents*; *EU Security strategic communication institutions*; *EU Security Governance future: alternative scenarios*.

A general dissemination campaign will be implemented to create a broad understanding of the importance and the particularities of EU Security Governance: two conferences, opening and closing conferences; a MA and a PhD round-table debates The main output is represented by the training of a target group formed by master students and PhD candidates in security and intelligence studies that must better understand the direct and indirect implications of EU's security governance impact on the member states.

CALL FOR PAPERS ROMANIAN INTELLIGENCE STUDIES REVIEW

"Mihai Viteazul" National Intelligence Academy, via its National Institute for Intelligence Studies, publishes the *Romanian Intelligence Studies Review* (RISR), a high quality peer reviewed and indexed research journal, edited in English and Romanian twice a year.

The aim of the journal is to create a framework for debate and to provide a platform accessible to researchers, academicians, professional, practitioners and PhD students to share knowledge in the form of high quality empirical and theoretical original research papers, case studies, conceptual framework, analytical and simulation models, literature reviews and book review within security and intelligence studies and convergent scientific areas.

Topics of interest include but are not limited to:

- Intelligence in the 21st century
- Intelligence Analysis
- Cyber Intelligence
- Open Source Intelligence (OSINT)
- History and memory in Intelligence
- Security paradigms in the 21st century
- International security environment
- Security strategies and policies
- Security Culture and public diplomacy

Review Process: RISR shall not accept or publish manuscripts without prior peer review. Material which has been previously copyrighted, published, or accepted for publication will not be considered for publication in the journal. There shall be a review process of manuscripts by one or more independent referees who are conversant in the pertinent subject area. Articles will be selected based on their relevance to the journal's theme, originality and scientific correctness, as well as observance of the publication's norms. The editor evaluates the recommendation and notifies the author of the manuscript status.

The review process takes maximum three weeks, the acceptance or rejects notification being transmitted via email within 5 weeks from the date of manuscript submission.

Date of Publishing: RISR is inviting papers for No. 27 and 28 and which is scheduled to be published on June and December, 2022.

Submission deadlines: February 1st and July 1st

Author Guidelines: Author(s) should follow the latest edition of APA style in referencing. Please visit www.apastyle.org to learn more about APA style, and http://www.animv.ro for author guidelines. For more details please access the official website: **rrsi.ro**

Contact: Authors interested in publishing their paper in RISR are kindly invited to submit their **proposals electronically in .doc/.docx format at our e-mail address rrsi@sri.ro, with the subject title: RRSI article proposal.**

Appearing twice a year, the review aims to place debates in intelligence in an institutional framework and thus facilitating a common understanding and approach of the intelligence field at national level.

The target audience ranges from students to professionals, from the general public to those directly involved in intelligence research and practice.

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