

# THE POTENTIAL IMPACTS OF COVID-19 PANDEMIC ON INTERNATIONAL DEFENSE AND SECURITY

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## ABSTRACT

The world is struggling with the widely spread effects of the virus Covid-19. The damage until now took more than a million people in less than a year, which is more than a considerably number of small wars together. The purpose of this article is to identify signs, uncertainties and trends from future studies that have been written in the last few months by government agencies, large private companies, academic institutions and worldwide organizations about the influence of the pandemic in areas such as economy, international relations, geopolitics, environment, technology and society in order to assess those of main potential impacts for national defense and international security. The methodology relied on semantic analysis application based on 55 selected futures studies (reports, papers, books etc.) written in three largely spoken languages regarding both Covid-19 and prospective scenarios. The analysis focus on the complex tangle between technology and society, as well as, between politics and economy. The results are summarized in a list of variables of trend or uncertainties followed by some possible impacts on how they can interact or affect the issue. This paper points out the necessity to look over this pandemic horizon with contributions from different government departments, think tanks, academics and non-governmental organizations to short the time-lapse between the strategic formulation and its results.

**Keywords:** Covid-19 pandemic. National defense. Scenario planning. International security.

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## INTRODUCTION

The purpose of this article is to identify signs, uncertainties and trends from future studies that have been written in the last few months by government agencies, large private companies, academic institutions, worldwide organizations etc about the influence of COVID-19 in areas such as economy, international relations, geopolitics, environment and to assess those of main potential impacts for national defense and international security.

At the moment this article is being written, the world is struggling with the widely spread effects of the virus Sars-CoV-2, also known as coronavirus or Covid-19. The damage until now took more than a million people lives in less than a year, which is more than a considerably number of small wars together. As a health problem the disease puts a challenge for doctors in particular and the whole population because it can easily spread and rapidly can overcharge hospitals and the health system. Economically some organizations estimate that the impacts of covid could generate the biggest global recession since World War II (WORLD BANK, 2020).

At the same time most of the countries tries to mitigate coronavirus spreading by adopting strategies that includes social distancing and other measures to reduce direct contact between people. In the absence of other options, or a cure, slow contamination between the population still the basic strategy in many places. While science all over the world competes in the search for a reliable vaccine, professionals are trying to understand how and why can be prepared for situations like this. In this sense, many experts ask themselves how can we prevent or reduce the drastic effects generated by pandemics in the years ahead. -

The pandemic caused by the coronavirus has profoundly altered the dynamics of the economy, domestic/international political relationships and people's behavior. The issues of security and defense did not stay away from these changes. As a broad public policy the defense sector is not just an active actor in the pandemic. In most of the countries affected by covid-19 its doctors, soldiers and medical teams are being required, but at the same time, these sector is one of the most affected, considering not only just their personnel and the higher risks of contamination but also that the defense activities encompass a huge number of other activities even in civil society such as industries, exportation, jobs and defense economy.

Regarding this question, one of the most reliable ways to grasp possibilities of future resides on the methods and tools presents on the field of Futures Studies, including Scenario Planning as one of the Prospective Methods. As the world walks through this dramatic event, experts started to discuss and explore possibilities in which such methodologies can help us to prepare for the next pandemic. See beyond is a valuable attribute and in a world of uncertainties the capacity to obtain any kind of awareness about the future can save millions or billions of lives in the next decades. It is useful not only to deal with covid-19 long effects but also with new pandemics and other global tragedies. Sooner or later a similar event could occur and is important that those capable of take decisions today that can impact the future altogether with other societal actors to search for ways to prepare for situations like this.

In this sense, this paper explores this set of current early works on futures studies developed by strategic foresight professionals and organizations addressing the covid-19 emergence and its long term effects.

To fulfill this effort the first part will consist in a contextualization about what is coronavirus and how the virus is affecting the global society and the impact of pandemics trough centuries. Second, a typology of prospective studies, including scenario planning, was used as a theoretical foundation to expose what consist and how it can contribute to create awareness about the possible futures. And third, using the methodological support tool of semantic network computational techniques, the work intends to expose and discuss its results related to signs, trends and uncertainties, as well as the multiple impacts for national defense and international security.

## A BRIEF HISTORY OF PANDEMICS

Pandemics happen when a certain disease can't be contained within a community and spreads to neighbor tribes, countries and so on. It differs from an epidemic, which could be aggressive but tends to have a minor area of effect. Any kind of pandemic at certain level was an epidemic. So the difference does not reside just about the disease specifically but the geographical scale that a pandemic can reach in comparison with others cases. And of course the number of people affected (MOCNIK et al, 2020). A pandemic is not just a health catastrophe. It's a geographical event too.

Although pandemics could sometimes take world by surprise, they are not newcomers in human history. Virus and plagues are present in our history since the ancient times. Even in recent history, specialists estimates that diseases like the Spanish flu were responsible to have killed around 50 million people in 48 countries, which correspond to 2.1 percent of world population at the time (BARRO; ÚRSUA; WENG, 2020, p. 2). In terms of numbers it represents more deaths than the First World War that occurred at the same time. Throughout history we can point out numerous events related to epidemics. In terms of diseases there was malaria in Roman Empire, plagues in the Middle Ages, leprosy, and smallpox etc. Between epidemics and pandemics, we can at least count 50 different episodes from the ancient Greek until the contemporary surge of tuberculosis in the beginning of the year 2000 (HAYS, 2006).

On the other hand pandemics could affect the societal level in many ways. Today people migrates faster, interactions between countries, especially because of the global market are continual and any kind of virus can without much trouble cross the barriers that separate any kind of border. In the ancient times a travel could consume months. Today people can go to any place on earth in less than 20 hours. This means that risks of epidemics scale to pandemics are higher than never.

So as we can see this kind of event cannot be considered something new. The possibility was always there and history proves it. Even in the in the field of futures studies, some authors such as Nassim Taleb, which is the creator of the famous "Black Swan theory", public sustained that we can't consider the coronavirus as a black swan event (AVISHAI, 2020). For thousands of years humanity believed that all the swans were white, until the first black one was spotted in Australia by the Dutch expedition commanded by sea captain Willem Vlamingh. In the essence black swans are events extremely rare and with high impact. They tell us about the fragility of man's knowledge, certainties and learning only through observations and empirical experiences (TALEB, 2007).

But is there anything that can be done for the future? Our answer is yes. The fact that pandemics are predictable opens a path for academics, scientists and decision makers to explore the scenario planning field and prepare or at least be aware about possibilities of such social impact.

## CREATING AWARENESS ABOUT POSSIBLE FUTURES

The future is shaped both from forces and dynamics of natural, social and political sources. Even though some of them are out of our control, thinking about the future and making plans are human common activities. "Society cannot control the future, but it can influence the course of history. This influence makes worthwhile the effort to consider the balance between what we want and what is possible" (GLENN, 2008, p. 1).

As the international security environmental changes in this current global turmoil become faster, the connections between the variables and its cause-effect relations are more difficult to realise (or foresee).

Chaos and complexity are the new buzz words in both science and contemporary society. The ideas they represent have enormous implications for the way we understand and engage with the world (BYRNE, 1990, p. 4).

We need to learn how to extend our thoughts to a greater span of time and improve our sight in the shadows to foster more forward-thinking approaches to international policy in order to provide urgent and radical key decisions about a new agenda world security (CORREA, CAGNIN, 2016).

Why and how the future can be studied? Which are the reasons to try to foresee what is going to happen in a long-term environment in areas such as international relations, politic science, ecology, economy and others related to human activities, but also with impacts in defense and security.

Emery and Trist (1965, p. 11-14) classify uncertainty into three levels, the highest of which is called the turbulence field. This would be characterized by the highest amount of causal interconnections between the elements of the environment combined with the lowest possibility of influence of the organization in the environment and the highest of influence of the environment in the organization. Think strategically is a way to realize that is better plan to anticipate and to address uncertainties, than just respond to the ever changing conditions.

As surprises cannot be entirely avoided and anticipation is closely linked to prevention, we should improve the understanding about the future consequences of present developments and choices and place more emphasis on considering "the implications of crises to ensure better integration of our approaches across the short, medium and long term". It

could enable sharper actions to prevent crises and conflict (MUNRO, 2020; AMARA, SALANIK, 1972, p. 415).

Once the classic methods of projecting past trends to predict one future is no longer useful due to the high degree of uncertainty and complexity in the all kinds of environments, a proactive attitude toward decision making process is necessary to support long-term actions. It must be done by organizations to anticipate and shape the future, because it comes faster and faster among non-linear behaviors of actors, from individuals to countries and companies (DRUCKER, 1993; GODET, 2000)

Futures studies are based on a large amount of quantitative and qualitative methodologies to “systematically explore, create, and test both possible and desirable futures to improve decisions”. It includes analysis of how signs and trends about main uncertainties might change as a result of the human decisions and natural forces and of it’s cross-impacts consequences also because the interaction of issues has a central position in the policy challenges we face today (GLENN, 2008, p. 1, MUNRO, 2020).

The value of futures research is not about the accuracy to know the future but about the enhancing of anticipatory consciousness to widen the mind models of individual and organization decision makers about perceptions of new possibilities and anticipation of opportunities and threats. It depends on the careful selection of methods and the skills of the practitioners to deal with the tools to bring data and transform it into knowledge.

This way, they can think about possible or desired, near or distant futures and change the policy agenda today to better develop prevention strategies as frameworks to act faster or earlier and to apply to situations as the ongoing COVID-19 pandemic that requires different levels of urgency (MUNRO, 2020).

Foresight is undertaken when a country, region or organization faces a specific challenge. It implements a process of systematic reasoning to develop “visions”, understood as possible future states of affairs that can be reached (or avoided) through action in the present. Each Foresight exercise will be based on its own specific premises and will have a number of objectives, functions, limitations, outcomes and benefits (EFP, 2020).

The signs in the past and present of the behavior of forces and actors that can condition the development of future realities vary in the degree of predictability. Some of them are named: trends; critical uncertainty and wildcards. Delphi, Cross Impacts Analysis and Prospective

Scenarios are the methods used in the majority of futures studies in order to help the treatment and organization of information about those signs and interactions needed between sources of knowledge and planning teams (POPPER, 2008; CORRÊA, LAURO AND NICHOLS, 2019).

Prospective Scenarios are qualitative descriptions of plausible alternative projections of how the present will evolve into possible outcomes. They must be built as surprising, realistic, challenging, contrasting, contextual and vivid histories of alternative futures contexts in a world of great uncertainty, based on the assumption of an unstable underlying structure (SCHWARTZ, 2012; CORRÊA, LAURO, NICHOLS, 2019).

## METHODOLOGY

Until now, dozens of future studies have been written in the last few months as a way of probing which new paths would be possible in the medium and long term regarding the post covid effects on society as whole. Some of them were written in forms of prospective scenarios.

For the purpose of this study a total of 136 texts were initially collected during the period of March and September. This first phase aimed find the max number of texts in which a relation between future and covid were present through the internet, articles library and social networks. In this first stage the search focused on the following keywords: covid/prospective scenarios, covid/strategic foresight and covid/prospective in three languages.

The second phase consisted in filtering the texts more close to scenario planning that were capable of application of semantic networks analysis. To attend to this goal the works selected needed to meet the following criteria. First, it was necessary that the selected material versed about covid-19 in some extent. The context should focus on the future (short term, middle term and long term). In this manner, the methodology avoided conjectural analysis from the present. There were also discarded blogs, videologs, personal posts on social networks or other media models that do not allow the revalidation of the data presented. The remaining works were classified and divided in a scale of relevance. The scale has 3 levels: low, medium and high. The relevance of the scale is determined by how close the texts were to the parameters. Three main factors were considered. First, the time horizon of work (the longer, the better). Second the presence of some methodology description. And

third if that methodology used Prospective Scenarios tools (swot matrix, brainstorming, Delphi method etc). The presence of Scenario Planning tools guarantees an extra point to the work. In this way, even a work that is short or medium term would have to be considered of high relevance due to the methodological presence of analytical tools.

After this selection, 55 remained. Between them 33 were in English, 18 in Portuguese and four in Spanish. They were classified in 7 categories according to their origin as described in Table 1.

**TABLE 1 – Categories of selected foresight studies sources**

<b>Categories</b>	<b>Quantities</b>
Scientific articles	4
Organizations	11
Private companies	7
Government	2
Internet Pages	2
Universities	3
Newspapers and magazines	3
Total	<b>32</b>

(Source: Authors)

## METHOD – SEMANTIC NETWORKS

Semantic network is a statistical technique developed to identify meanings based on counting and analyzing the position of words throughout the text, helping to achieve the maximum amount of information contained in a text (quantitative aspect) with maximum relevance (qualitative aspect), and thus composing a document analysis technique, which, according to Bardin (2011, p. 51) “allows moving from a primary (raw) document to a secondary document (a representation of the first)”. Hence, with the analysis of semantic networks, it’s possible to create a condensed representation of information, for consultation, storage and subsequent interpretation.

This technique can also be considered as a text mining technique, which consists of discovering data from texts (WIVES, 2002).

In this article, the software KH Coder version 3.Alpha.16 (HIGUCHI, 2001), was used, the Jacard distance, recommended for

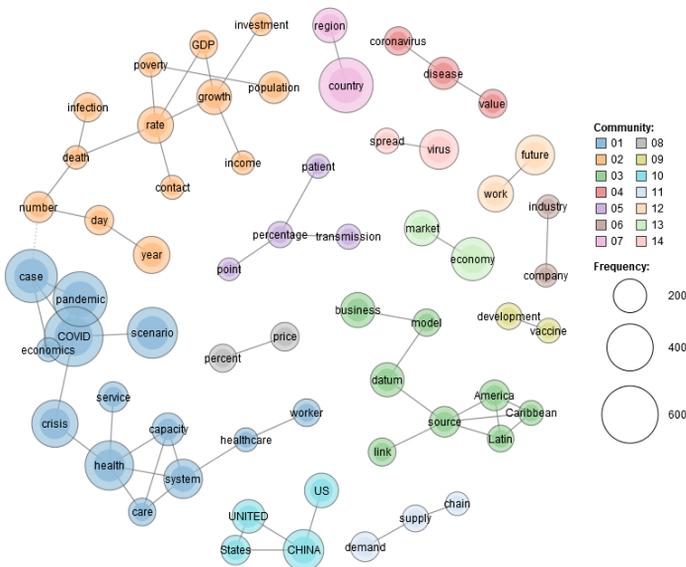
identifying of centralities, was set as standard. For its execution, it is necessary to select the texts and prepare them by transforming the texts to txt files. The treatment was done with the software RStudio, version 1.1.1093, with the removal of pre and post textual parts, except for prefaces, elimination of special symbols and / or unrecognized characters. In the analysis phase, proper nouns and nouns were studied.

## IDENTIFICATION OF VARIABLES AND ANALYSES

After the readings and reflections carried out on the texts, we split the analysis from a dilemma pointed out by Yuval Harari, between “totalitarian surveillance and the empowerment of citizens” (HARARI, 2020). While the spread of the disease demands a strict control of the population, the idea of freedom built in Western culture, based on democratic systems, does not diminish and the citizen's empowerment challenges the control required by “health surveillance”.

From this dilemma, we will analyze political, economic, technological and social aspects identified in the papers. Figure 1 presents the semantic network elaborated from documents in English, using Jacard's distance with the 60 most frequent words.

**FIGURE 1: Semantic network - Jacard's distance –most frequent words**



(Source: Authors)

One can identify groups of words that represent well the main concerns that are raised. The first to be highlighted, in blue, in the lower left part of figure 1, identifies the disease itself, the number of cases and its evolution to a pandemic situation, breaking existing behavior patterns. This group is the motto of the interpretation of all the others, without it the others do not exist; it indicates the severity of the problem and opens up possibilities for further analysis.

We see three groups pointing out the main geographic assessments: the first is "country - region" at the top in purple; the second, "US - China" in blue, below; the third, "Latin America - Caribbean", in green on the right.

The economic aspects can be highlighted by the groups "demand - supply - chain", in blue, at the bottom of the figure; "Industry - company", in brown, on the right; "market - economy", in green, in the center on the right; "Percent - price" in gray, in the center; and "business - model" in green, in the center.

The social issue is very well represented at the top left, in pale orange, by the cluster whose most frequent words are "rate - growth - population". Time, a characteristic variable of prospective studies, is portrayed by the frequency of the words "growth", "year" and "day".

This figure is one of the representations of the analyzes carried out in all texts. In the software, when one clicks on a word, one gets all the texts in which it appears, greatly facilitating identifying the context and interpretations reported below.

## TECHNOLOGY AND SOCIETY

In order to develop itself, science needs more than research, it needs an environment in which favorable economic and political/legal conditions exist. Technology also requires a favorable environment for its creation, support and expansion. The large technology centers are concentrated in certain areas of the world, unlike their widespread diffusion.

During the pandemic, many studies point out the impacts of technology both in the development of a cure and prevention solutions, and as a resource to allow social distancing (MARCIAL, 2020).

With regard to the biological question of the cure or prevention, the developing of a vaccine has become a geopolitical and power game in which developing vaccines are given names with highly symbolic

burden for a country, such as the case of Sputnik V, developed by Russia (MATTOS, 2020).

In this area, the impacts for Defense do not appear directly, but on the country's ability to find solutions to a problem that afflicts its population, and to employ biological agents as a weapon, even considering the various existing treaties on the subject. It should be noted that these treaties are not signed and/or ratified by many countries and that, as well as weapons of mass destruction, there are understandings that biological agents should not be used as weapons. However, for those who can manipulate biological agents, there is no limitation on its use other than the ethics of scientists and politicians, which, as history shows, sometimes surprises humanity.

Therefore, when a country has the capacity to articulate its research resources and orchestrates a quick reaction to the pandemic, it is showing far beyond its scientific capacity. It presents a capacity to articulate the whole of its society for the benefit of its national objectives, what is called deterrence.

In another aspect, digital technologies, whether they are part of communication, data digitization, sensors, artificial intelligence, internet of things or automation, among others, play a crucial role in social distancing. They allow easy and inexpensive communication, integrate value chains, increase production efficiency and change habits. The pandemic caused an intensification of the transition from the analog to the digital world and its consequent outcomes (CRIME, 2020).

This transition has a profound impact on how to wage war and defend a country. The potentialities and vulnerabilities are altered with the digitalization of society and, consequently, all resources to exploit these vulnerabilities and potentialities must be readjusted to this new reality.

Combat at sea, on the ground, in the air, in cyberspace or in the depths of the oceans takes on a new design and it's necessary to readjust the existing resources to face these challenges. The development of new weapons, monitoring, security and defense systems has gained notoriety while the digitalization of society has been accelerated, with its interconnection and integration supported by digital technology. Thus, the armed forces must contemplate in their strategies, including technological resources, their articulation with the society that needs to be defended.

Within this new reality, critical infrastructure, whether in transport, energy, economic, financial, health or any other nature, are more vulnerable to electromagnetic<sup>4</sup> and cyberattack (COHEN, 2019).

Consequently, the defense of a country cannot be thought of exclusively in the military sphere, and in this situation, perhaps the biggest challenge is not the technology itself, but the capacity of society to understand internal and external threats, and to articulate and develop solutions that encompass those issues.

The armed forces' capacity for innovation, along with the development of doctrines, take on new dimensions whose impacts will be known in the medium and long term, and then a new challenge arises: to maintain training with current conventional means, often outdated and high maintenance costs, or look for new solutions, based on knowledge and technology? How can this pandemic-accelerated transition be achieved?

It has long been argued that man is the most valuable resource of an armed force. Only man holds and transmits knowledge. Then, in the age of knowledge (PETERS; MARGINSON; MURPHY, 2012), is the investment in expensive, technologically and doctrinally "conventional" means worthwhile? The armed forces of the most advanced countries invest in technology and develop new armaments and doctrines, and to help finance this state of the art, they sell mediums with middle-aged technology to those who are unable to develop it. However, in this new ecosystem in which information flows much faster, innovation can break the traditional value chain in the defense market. Countries like India<sup>5</sup>, Turkey<sup>6</sup> and Iran<sup>7</sup> are looking for innovative solutions and seek the development of their defense industry.

When coupled with the technological facilities available, social distancing, recommended to reduce the spread of the disease, allows citizens to be empowered and causes changes in their habits that will probably remain after the pandemic is over, due to a familiarity with easy access to information, an ease to develop and educate oneself and the

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<sup>4</sup> <https://www.forbes.com/sites/arielcohen/2019/04/05/whitehouse-prepares-to-face-emp-threat/?sh=7a77df40e7e2>

<sup>5</sup> <https://www.voanews.com/south-central-asia/india-defense-chief-india-must-stop-buying-and-depending-foreign-made-weapons>

<sup>6</sup> <https://www.dailysabah.com/business/defense/damage-caused-to-assad-regime-assets-demonstrates-turkeys-high-uav-capabilities>

<sup>7</sup> <https://www.forbes.com/sites/arielcohen/2019/04/05/whitehouse-prepares-to-face-emp-threat/?sh=3defd74ee7e2>

possibility of becoming an entrepreneur in a dynamic way (ZALMAN, 2020). These possibilities that arise for each person also arise for other actors, whether they are private, from the third sector or state-owned.

Social networks, also exploited by companies as channels of dissemination and sale, and by politics as an environment of influence on their followers, are fertile ground for the propagation of ideas. The characteristic of bringing together geographically distant people and reducing the processing time of information strengthens groups and, paradoxically, polarizes opinions<sup>8</sup>. False information and misinformation are growing rapidly in this new environment (ECONOMIST INTELLIGENCE UNIT, 2020).

Just as the importance of social networks in people's lives increases, so do crime, criminal organizations and political groups, extremist or not, with great power of influence exploiting these networks. The change in behavior caused by the pandemic, however, tends to persist in many aspects, pointing to opportunities for new lifestyles. These personal changes that generate daily tensions are also powerful for personal and organizational learning (DAVIES, 2020). After the facilities of the digital world have been identified, with the end of isolation, criminals and other groups are unlikely to withdraw from their new activities, if they are achieving their goals (CRIME, 2020).

For this reason, the accelerated transition to the digital world requires from the state both adjustments to legislation and the development of new capacities to fight these crimes: there is a need for an immediate response to the situation (DAVIES, 2020). Also, considering that the narrative promotes the will and objectives of a population, the armed forces must be vigilant and prepared to face this type of threat, alongside its society. For the defense, the possibility of extremist groups threatening institutions, authorities, or infrastructure, corrupting and/or infiltrating state structures through these digital groups arises.

The need of controlling the narrative, convincing and motivating its populations is nothing new for the conducting a war. The novelty is the fact that the circulation of information in the digital world has the potential to disrupt or structure a narrative in a short span of time. Hence the importance of following and mastering the narrative on these digital platforms.

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<sup>8</sup> <https://www.project-syndicate.org/commentary/white-swan-risks-2020-by-nouriel-roubini-2020-02?barrier=accesspaylog>

Criminals who initially had their activities restricted by lockdowns also learnt to exploit all the potential of the digital world, increasing efficiency in their logistics chains, their articulations and organizations (CRIME, 2020). As well as business and state productivity increases, so do the efficiency and effectiveness of criminal actions. This trend can be confirmed with the 400% increase in cybercrimes against ports and ships between February and May 2020 (HANDY SHIPPING GUIDE, 2020).

In order to combat crime and increase their efficiency, states also use technology to control their processes and their citizens. The need for population control to stop the spread of the virus highlights the issue of individual control. In China, strict social control was augmented by a social reward system that rates citizens by points<sup>9</sup>. China was an example in eliminating the virus from its territory through strict lockdown.

Social control by the state is evidenced as relevant for facing the pandemic in the country of China, while in Europe and the USA, where liberal systems prioritize citizen empowerment, there was greater difficulty in controlling the virus. However, these authors are not aware of studies that prove the previous statement.

## POLITICS AND ECONOMY

The transformations in people's daily activities are also reflected worldwide, the polarization observed in social networks also grows in geopolitics, changing and showing a new global order in three different ways (ECONOMIST INTELLIGENCE UNIT, 2020, p. 1):

It will bring to the surface developments that had previously gone largely unnoticed, such as the way in which China has already established spheres of influence in parts of the world that receive little attention.

It will act as an accelerant of existing geopolitical trends, in particular the growing rivalry between the US and China and the shift in the economic balance of power from West to East.

Finally, it is likely to be a catalyst for changes that are presently difficult to predict, in both the developed and developing world, from the future of the EU to the relationship between many developing countries and China.

<sup>9</sup> <https://onovonormal.blog/2020/08/04/black-mirror-com-sistema-de-pontos-china-premia-ou-pune-cidadaos/>

The balance of geopolitical power is closely related to the spheres of economic influence. Chinese trade exchanges with the world are already established, as well as the consequent Chinese influence resulting from these exchanges, making supply chains worldwide dependent on this situation, as was evidenced by the lockdown in the Hubei province which caused the interruption of logistic flows worldwide, since the province is highly industrialized. The effect of the pandemic on this situation is reflected in the acceleration of the ongoing transformations and, probably, China will emerge from the pandemic greater than it entered (ECONOMIST INTELLIGENCE UNIT, 2020).

With these changes, regional powers such as Iran and Turkey increase their influence on regional scenarios, reducing American influence in these areas, making the world a more fragmented place (ECONOMIST INTELLIGENCE UNIT, 2020).

This situation is accompanied by a “de-westernization”:

The first change is the end of globalization - the dominant trend, since the Great Recession, is “de-globalization”, rather than “de-westernization”. The responses to the international financial crisis and the Euro crisis were protectionist responses, which mark the strength of the regionalization trend” Our translation (INSTITUTO DE DEFESA NACIONAL, 2020, p. 2).

In turn, the increase of protectionism was evidenced in the fight against the pandemic. States closed borders, deducted their economic activities and imposed their laws at the expense of international cooperation. These attitudes reinforced fragmentation and weakened International Organizations and regional agreements.

...a new health and economic brutal crisis, a decade after the Euro crisis, is an existential threat to the EU. There is a real risk of collapse if Europeans conclude that Brussels does not contribute to coordinating an effective response to the health crisis (even if such response mainly falls to Member States) Our translation (INSTITUTO DE DEFESA NACIONAL, 2020, p. 5).

Also, China promotes several agreements in the establishment of the new Silk Road<sup>10</sup> in a clear attempt to guarantee its economic interests and expand its political influence. But the global supply chains still suffer from protectionist measures, sanitary, technological and tariff barriers, taken in several countries, especially China itself and the USA (MARCIAL, 2020), and the industry still has difficulties in reestablishing its production in order to meet the growing demands arising from the virus transmission weakening.

This new dynamic imposed by the pandemic generates a concentration of power, especially for companies that manipulate information, and causes unemployment with the collapse of companies that were unable to adapt to this new reality. The impoverishment of the population has been remedied by many countries with the help of the state by redistributing income directly to the unemployed or facilitating financing. Depending on the degree to which it will reach the population in the medium term, it can generate serious social instabilities (MARCIAL, 2020) that may reflect on the new national and world order.

After an abrupt drop in world production in 2020 (INTERNATIONAL MONETARY FUND, 2020) the recovery of the economy is still an open question, since the second wave of infection that plagues the international community in November and December of 2020 creates many uncertainties, even with the arrival of vaccines.

The American elections won by Joe Biden add more doubts to the future state of this path and democratic countries that can, in one election, change their tendencies in favor of economic liberalism or social democracy are particularly sensitive to these issues.

At first, China opens up to the world, absorbing the best that capitalism has in order to promote innovation, growth, prosperity and social welfare. Currently, in the economic field, China promotes significant trade with the world and expands its sphere of influence, fueled by the needs of its population and its vigorous economic growth. Regarding the military, it promotes a restructuring of its armed forces, invests in technology and sustains a powerful military industry, to the point that forecasts indicate that its navy will be the most powerful in the world by 2035<sup>11</sup>. However, with the advent of the pandemic, it quickly closed its

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<sup>10</sup> [http://eng.mod.gov.cn/news/2019-07/24/content\\_4846443.htm](http://eng.mod.gov.cn/news/2019-07/24/content_4846443.htm)

<sup>11</sup> <https://www.usni.org/magazines/proceedings/2020/february/chinas-navy-will-be-worlds-largest-2035>

borders and established measures for its protection to the detriment of any integration it had been promoting.

On its turn, the United States responded firmly to the increase in Chinese influence, denouncing companies and exposing their social control policies. In this context, the war of information or disinformation takes on a relevant role at a time when the signs are ambiguous.

The international economic crisis has brought about profound changes in the international dynamic. The companies that were in a more fragile situation and that did not have the resources to support themselves during the lockdown, even with the help of the implemented protection measures, did not resist and broke down. On the other hand, companies that had a financial reserve capable of mitigating immediate impacts, preserving their activities, and their people, took advantage of the availability of technology, resources and opportunities generated by the crisis and expanded their spheres of power.

## CONCLUSIONS AND FINAL COMMENTS

The interconnected tangle that forms the future is made up of events that originate in the past and are influenced by driving forces over time. Therefore, it is important to know how these forces and actors behaved in the past and try to understand what their future behavior will be like.

In defence, the scenarios planning process fosters the ability to expand mental horizons and anticipate concerns about long-range environments, which gives extra time to better understand threats and opportunities, to develop more creative strategies, to share a vision for organizational change as well as to design and to build new systems, technologies and defence products.

The pandemic is a complex social issue and the effectiveness in combating it can be linked to several factors, and it is premature to state that citizen empowerment or social control are directly associated with combat effectiveness. While a control system requires a well-established security and defense apparatus for its operation and manages to converge efforts towards objectives well defined by the country's leadership, citizen empowerment bets on the process in which freedom is the main driver of innovation, transformation, growth and stability.

Thus, the question proposed by Yuval Harari (HARARI, 2020), citizen empowerment or social control, is well evidenced by the situation highlighted by the pandemic.

In the same possible futures contexts, political and economic issues present themselves as uncertainties that can profoundly alter the world situation and their impact on defense are uncountable.

With regard to political alignment, internal pressures and global changes still do not indicate the direction it will take. And, as the armed forces develop their strategies according to the existing political alignments, these uncertainties impact on their purchase of equipment and the shaping of their doctrines, normally influenced by the central countries and by the established supply chains.

In short, Chart 1 summarizes the main variables found in the studies analyzed, where a wide and ambiguous variety of complexity levels, impacts, knowledge areas and sources can be seen.

**Chart 1 – Trends and uncertainties from Pandemic related to defence and security**

VARIABLE	CATEGORY	NOTES
Technological capability	Trend	Increased technological developments. Concentrating in those who own information.
Internal articulation capability	Trend	Increased internal articulation capability and capacity.
Capability of worldwide articulation between countries	Uncertainty	Decrease. The evidence of polarization is not strong enough to be defined as a trend.
Formation of regional blocks - world level	Uncertainty	Despite the fragmentation of power observed during the pandemic, there is still insufficient evidence to recognize it as a trend;
Digitization of society	Trend	Increased participation of digital technology in social everyday life. Intensified with the pandemic.

Technological resources applied to defense	Uncertainty	How important conventional medias will be in the face of emerging new technologies.
Cybercrime and new forms of crime	Trend	Increase in the number of cybercrimes. Increased use of digital resources by criminals.
Battle of narratives on social networks	Trend	Increased spread of fake news and partial information to manipulate public opinion
Social control of the population through technology	Uncertainty	Practiced in some countries and repudiated in others.
Increased control of production chain flows and processes	Trend	Both states and companies are using technology to increase the efficiency and effectiveness of their processes.
Citizen's digital empowerment	Trend	Increases with the entry of people into the digital world. Accelerated by the pandemic.
Global balance of power	Uncertainty	Chinese economic and military growth, the American responses, mixed signals from economic blocks and presidential elections don't allow trends to be identified.
Economic liberalism or protectionism	Uncertainty	Ambiguous signals generated by political positions. Breaking of global supply chains due to protectionist measures.

(Source: Authors)

Due to those characteristics of unpredictability, the military branches and defence departments of almost all the countries in the world have been applying scenario planning and other forward-looking methods, not to foresee the future neither attempting to pinpoint when particular trends nor characteristics will emerge, but to try to understand the possibilities of futures environments.

Referring to surprises at the high operational and strategic levels in World War II, Fleet Admiral Nimitz said that “nothing that happened during the war was a surprise... except the kamikaze tactics...; we had not visualized those”<sup>12</sup>. That kind of new threat would be better perceived, ie, visualized, if, in the planning boards, there were open minds and open mood to listen to the small signs of the futures from sources of knowledge as anthropology or religion area. The signs of awareness about the sinking of the HMS Titanic, of the al Qaeda September 11 attacks and of the 2020 Pandemic were previously emitted, but ignored.

More than give a list of signs of trends and uncertainties, this paper points out the huge turmoil of the environment, made harder with the Covid-19 pandemic, which keeps receiving influences from a large and complex set of sources. So, it brings the necessity to look over the horizon with contributions from across defence, other government departments, think tanks, academics and non-governmental organizations that can help to short the time-lapse between the strategic formulation and its results in the learning process.

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<sup>12</sup> Fleet Admiral Chester Nimitz speech to U.S. Naval War College, 10 October 1960, Folder 26, Box 31, RG15 Guest Lectures, 1894–1992, Naval Historical Collection, Naval War College, Newport RI.

# IMPACTOS POTENCIAIS DA PANDEMIA DE COVID-19 EM DEFESA E SEGURANÇA INTERNACIONAL

## RESUMO

O mundo está lutando contra os efeitos amplamente disseminados do vírus Covid-19. Os danos até agora atingiram mais de um milhão de pessoas em menos de um ano, o que é mais do que em um número considerável de pequenas guerras juntas. O objetivo deste artigo é identificar sinais, incertezas e tendências de estudos futuros que foram escritos nos últimos meses por agências governamentais, grandes empresas privadas, instituições acadêmicas e organizações mundiais sobre a influência da pandemia em áreas como a economia, relações internacionais, geopolítica, meio ambiente, tecnologia e sociedade para avaliar os principais impactos potenciais para a defesa nacional e a segurança internacional. A metodologia contou com a aplicação de análise semântica com base em 55 estudos de futuros selecionados (relatórios, artigos, livros, etc.), acerca de Covid-19 e cenários prospectivos, escritos em três línguas amplamente faladas. A análise enfoca o complexo emaranhado entre tecnologia e sociedade, bem como entre política e economia. Os resultados são resumidos em uma lista de variáveis de tendência ou incertezas seguidas por alguns possíveis impactos sobre como eles podem interagir ou afetar a questão. Este documento aponta a necessidade de olhar sobre este horizonte pandêmico com contribuições de diferentes departamentos governamentais, grupos de reflexão, acadêmicos e organizações não governamentais para encurtar o lapso de tempo entre a formulação estratégica e os seus resultados.

**Palavras-chave:** Pandemia Covid-19. Defesa Nacional. Planejamento de Cenários. Segurança Internacional.

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