



Journal of Social and Political Sciences

Denchev, Stoyan, and Yordanova, Steliana. (2020), The Biological Weapon as a Tool for Psychological Impact in the Context of Hybrid Warfare. In: *Journal of Social and Political Sciences*, Vol.3, No.3, 875-882.

ISSN 2615-3718

DOI: 10.31014/aior.1991.03.03.220

The online version of this article can be found at:
<https://www.asianinstituteofresearch.org/>

Published by:
The Asian Institute of Research

The *Journal of Social and Political Sciences* is an Open Access publication. It may be read, copied, and distributed free of charge according to the conditions of the Creative Commons Attribution 4.0 International license.

The Asian Institute of Research *Social and Political Sciences* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of Social and Political Sciences, which include, but not limited to, Anthropology, Government Studies, Political Sciences, Sociology, International Relations, Public Administration, History, Philosophy, Arts, Education, Linguistics, and Cultural Studies. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Journal of Social and Political Sciences* aims to facilitate scholarly work on recent theoretical and practical aspects of Social and Political Sciences.



ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide



The Biological Weapon as a Tool for Psychological Impact in the Context of Hybrid Warfare

Stoyan Denchev¹, Steliana Yordanova²

¹ Prof. DSc. University of Library Studies and Information Technologies. President of University General Assembly. Director Institute of Informing Science, Knowledge Management and Security. Department of National Security. Email: s.denchev@unibit.bg

² PhD candidate. University of Library Studies and Information Technologies. Sen. Expert in Institute of Informing Science, Knowledge Management and Security. Email: s.yordanova@unibit.bg

Abstract

In the last decade, the world has begun to change, transforming from unipolar to multipolar. The new geopolitical battle, whose main goal is to preserve the dominance of the hegemonic country in the crumbling neoliberal and monopolistic world, has prompted world powers to redistribute the leading roles when establishing a new world order. In order to achieve these goals, stakeholders began to use all their available conventional and unconventional resources, including different methods of warfare - a combination of different weapons, terrorism and criminal behavior, unregulated strategies and tactics - from the oldest known to mankind to the newest warfare technologies, called hybrid war by the political and military strategists. In the case of hybrid warfare, the sphere of affirmation is no longer the pure military force. In fact, it affects all spheres of public life - political, economic, cultural. The construction of elaborately combined actions, bypassing the known boundaries of the traditional characteristics of threats and the use of organized violence, have a powerful psychological impact on the mass consciousness of society. It is a well-known fact that there have long been secret and open laboratories for the development of biological weapons, with a main purpose to gain a strategic or tactical advantage over the enemy, either by threats or by the actual deployment on "battle positions" as well as their actual use against enemy countries. Even more worrying is the fact that these weapons could be aimed both at the moral deactivation of the enemy's forces and at their actual physical destruction. In the present report, the authors aim to seek and provide an answer - is there a link between biological and hybrid wars in their virtual or real function as a tool to achieve certain political goals.

Keywords: Hybrid War, Biological Weapon, Psychological Impact

INTRODUCTION

The world has been multipolar for the most part of its existence. After the end of the Cold War, USA, the winning country, imposed a new unipolar model of a single global superpower. However, the expectations of the World Community that this model will be stable and reliable and will guarantee the expected peace in the world, remained unjustified. In order to maintain its position as a world power for as long as possible and to

protect its foreign policy interests, the hegemonic country focused its forces and resources on opposing the competing forces.

With the transformation from a unipolar to a multipolar international political system, the main problem facing the only global superpower is the failure of this change or at least its maximum delay in time. The emergence of new and equal global actors would deal a serious blow to the economy and the financial system of the global superpower. Raising new currencies to their reserve status would have an impact on the global financial system and standard of living in a number of powerful countries, which is expected to lead to domestic political conflicts and social tensions. If the dollar loses its dominant position, then, quite naturally, it cannot continue to be an instrument of influence in international processes. Faced with this reality, the only strategy the world leader can apply is preventing the rise of the other great powers, building powerful geopolitical centres and creating instability and tension on their periphery. The events that shook the international political scene with a massive wave of protests and military conflicts from the recent past (2013) and those from the end of 2019 and the beginning of 2020 provoked some analysts to conclude that after the Cold War, the security environment went through changes and the world shifted to a new situation, with renewed competition among the great powers to impose a new international order.

HYBRID WARS

The rapid technological development since the end of the Cold War, which led to globalization, has proved to be a major factor in the loss of resilience in the socio-economic relations.

The impact of the Cold War on the security of the states has led to a shift in the national security paradigm. Through the prism of protecting national interests, the post-Cold War doctrine of military planning attempts to describe the security environment and its potential threats, identifying numerous ideas about the growing complexity of threat participants that do not match traditional enemy characteristics.

The threats of hybrid wars are proving to be a significant challenge for military operational and strategic planning, whose prediction is not an impossible task. However, in general, their chaotic and complex nature proves elusive to analysts and strategists who find it difficult to incorporate hybrid threats into traditional threat methods. For this reason, the strategy of hybrid warfare is rejected by some and accepted and used by others. Of course, the use of appropriate set of tool - strategic, operational and tactical, to identify the desired final state of the threat initiator, provides a prerequisite for a good forecast that ensures an advantage in understanding the possibilities and the intent of their implementation.

If the characteristics of traditional threats aim to minimize the complexity of the potential enemy, which in many cases leads to overestimation or underestimation of its intentions and capabilities, then hybrid methods seek the most accurate description of the enemy and their potential threat, which would allow symmetrical opposition to its strategic goals.

Military strategists view hybrid wars and their threats as the most confusing features of the international security environment, since flexible, adaptive and large-scale military forces are needed to counter and deal with them. To achieve their goals, aggressors use elements of hybrid warfare, focusing on organizational capabilities and gaining an asymmetric advantage over the enemy without having to resort to politically and economically costly, traditional wars. The term "asymmetry" is relatively new and is used to present threats in a new and non-standard way, while in military affairs it is used to identify and use differences in order to gain an advantage over the enemy.

To achieve the desired effects, hybrid wars target their actions towards vulnerabilities in societies in ways we do not usually think about or prepare for. Using deliberate ambiguity, they make attacks invisible, or at least less noticeable, allowing their presence and adaptation below the detection threshold, thus inevitably influencing the decision-making process and the appropriate response action.

To prevent the possible prediction and future counteraction of attacks, the initiators of hybrid wars use various ways to synchronize the means with a wide range of tools and techniques. It is for this reason that such a war may not be "seen" for a long time until its final phase is underway.

In pursuit of its goals, the adversary using hybrid methods seeks to destroy not only the military forces of nations, but also to destroy and destabilize entire societies. Therefore, instead of resorting to costly traditional economic and political wars, aggressors often use hybrid elements, which can be not only in the form of armed battle, but also a combination of well-planned strategic actions, purposefully combining different methods of "conducting of conflicts". Used comprehensively, the methods can be a combination of: military, political, social, economic, psychological or terrorist, with conventional and unconventional actions such as cyber warfare, crime, insurgency, ethnic warfare, detention and many others.

Perhaps the most important feature of hybrid warfare is the combination of limited military and a full range of non-military actions to achieve primarily political goals. In this way, not only the state – a target and an object of informal aggression, but also the international community can hardly say until the last moment and with sufficient certainty, whether a coordinated offensive is being waged against the respective state or not.

Another indisputable advantage of hybrid methods over conventional ones is that one military opponent, regardless of whether they have superiority over the other, has the opportunity to face their stronger opponent for an indefinite period of time, generating the desired effects.

BIOLOGICAL WEAPON (BW)

There are several surefire ways in the history of mankind to place man under someone else's control: by using violence in various forms, be it physical, mental or emotional; by using information techniques such as lack of information, deliberate misinformation, ignorance, lies or by threatening the physical survival of the individual - disease, hunger, thirst, etc.

As early as the Middle Ages, people realized that diseases could be transmitted from the sick to the healthy, and so with the power of new knowledge they set in motion a new kind of war. The use of biological agents has been a practice in war since ancient times and in many conflicts, they have caused far more casualties than the use of real combat weapons. Fighting conflicts were often accompanied by epidemics in which, as a result of heavy losses of armies and civilians, the outcome of battles or even wars themselves were predetermined.

Biological weapons today are living organisms or replicating entities - viruses that reproduce or multiply within their 'hosts'. Their main purpose is to gain a strategic or tactical advantage over the enemy, either through threats or through actual deployment. These agents can be lethal or non-lethal, can be directed against an individual, a group of people or an entire population, and are acquired, stored or implemented by nation states or non-national groups. In the latter case, or if a nation state uses it illegally, this can be considered bioterrorism. The use of BW is prohibited under international humanitarian law, as well as under various international treaties, and the use of biological agents in armed conflict is treated as a war crime.

Biological weapons, as well as the threat of their use, are often cited as the cause of military conflicts. The Code of War defines it as the deliberate use of microbes and toxins that, through both living and dead people, animals and plants, can be used as weapons.

The main factors that attract the use of biological weapons are that they are difficult to detect, but they are also cost-effective and easy to use. The cost of their production is estimated at around 0.05% of the cost of conventional weapons when looking at a similar number of mass casualties per km². The use of common technology – as the one used to produce vaccines, foods and antibiotics – is a very real possibility and thus, the production of BW is an extremely easy task.

Another significant advantage of biological weapons is the presence of an incubation period - 3 to 7 days on average, which allows perpetrators to "work" undisturbed as well as to be in every possible part of the world, when the results are manifested, too.

For strategic and tactical purposes, BW began to be actively developed during the 1940s and until the 1970s. It was considered a "more humane" tool than the nuclear, because when used - whether by aerosol or through food, water plants, infected objects or bio kamikaze (deliberately sending sick people to places with many people) - it does not lead to the destruction of cities, factories, equipment, cultural sites, etc.

BO is associated with many dangers and this fact led to the adoption of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxic Weapons and on Their Destruction (UNCCD) by the United Nations (UN) General Assembly. The Convention on the Prohibition of Biological Weapons was opened for signature in 1972 and came into force in 1975. The UNCCD states undertake the obligation not to develop, manufacture, acquire, store or use biological or other toxic weapons, while the universalization of the Convention is considered a key element in the international community's efforts to tackle the proliferation of weapons of mass destruction.

Almost until the very end of the twentieth century, however, political circles and society massively underestimated the potential use of biological weapons, as they relied on the assumption that, first - science was not yet able to cope with the technological production of sufficient amount of bioagents for bioattack, that their use was unlikely, and last but not least - they believed that no state or organized group would violate moral principles by proceeding to the use of such weapons.

Naturally, all these arguments have proved definitely unfounded. We all remember the anthrax attacks in the United States, which began just a week after the brutal terrorist attacks in New York and Washington on September 11.

Globalization and the development of biological science are the main factors for increasing the possibilities for using BW. Globalization, which as a process contributes also to the smooth movement of the population to almost any point on Earth, contributes to the faster and easier infection with pathogens as well. And given the opportunities for covert use of bioagents, the low cost of producing them, and the relatively easy way to acquire them, bioagents are becoming attractive and accessible for diversionary and terrorist purposes.

The development of biological weapons for the purposes of terrorist organizations turns out to be a much cheaper and easier task than the development of nuclear or chemical weapons, and the long enough, hidden period until the disease manifests itself, allows the perpetrators to deploy their "*weapons*" and leave the attacked area long before the infection itself has unfolded.

The twentieth century is saturated with many attempts to deliberately use bioweapons. The development and the achievements in the field of biotechnology have definitely created a precondition for the creation of new species of organisms that have sufficiently durable and reliable characteristics to be classified as BW, thus significantly increasing the risks of such attacks, be they intentional or unintentional.

GENETICALLY MODIFIED ORGANISMS (GMOs)

As a result of the globalization processes in the world economy, the power of the state began to give way to the power of corporations, and the beginning of their merger marked the beginning of the corporatocratic state. Large companies taking away parts of the SME market are growing more and more, while transnational companies (TNCs) are committed to maintaining American hegemony around the world.

Corporatocracy created the necessary conditions to launch the production of transgenic products, the so-called genetically modified organisms (GMOs). The actions of genetic engineering corporations seem to be aimed at changing the Earth's food chain, since achieving food control is a quick and safe way to control humans.

The fears of the international expert community that the effects caused by GMOs can be defined as weapons of mass destruction, which make GMOs a potential genetic weapon for terrorist acts, are well-founded.

Transgenic microorganisms are living organisms in which, with the help of artificial techniques, one or more genes of another species have been introduced, a process that could not have occurred naturally. The production of GMOs aims to achieve certain characteristics of a living organism, which by nature it does not possess. Genetic modification can be achieved in three ways: by altering the natural genes, by adding additional copies of the genes of the organism, or by introducing genes of another kind.

Although the creation of GMOs seeks to justify humanitarian reasons that accelerating their production covers the ever-growing needs of food supplies for a growing world population, that food quality is improving or that the sustainability of production is being achieved, it is well known to everyone that these modified organisms are also extremely dangerous to human health. Placed in the hands of certain subjects, these powerful tools can prove to be a dangerous weapon against humanity. They can, invisibly but unequivocally, affect negatively the health and life of all mankind.

The development of genetically modified organisms (GMOs) can also be mentioned as an essential component of hybrid warfare, since among the main problems that are taken into consideration when creating transgenic products is the real threat of the so-called GMO terrorism. Accordingly, in 2004 the NATO Committee on the Challenges of Modern Society (CCMS) held a meeting of experts from member countries and other countries on the problems of "genetic terrorism". Concluding that GMOs can be used as biological weapons, it was decided that they should be added to the list of substances and microorganisms which, entering the human body through food or water, can be the cause of dangerous diseases. Experts have concluded that spreading a certain modified organism over areas planted with traditional crops will provoke various epidemics, poisonings and epidemic outbreaks, including diseases that have not existed in the relevant country so far.

FINDINGS:

The threats of hybrid wars are proving to be a significant challenge for military operational and strategic planning. Their prediction and identification is not an impossible task, but their chaotic and complex nature proves elusive to analysts and strategists who find it difficult to incorporate hybrid threats into traditional threat methods. Of course, the use of appropriate set of tools - strategic, operational and tactical, to identify the desired final state of the initiator of the threat, provides a prerequisite for a good forecast that ensures an advantage in understanding the possibilities and the intent of their implementation.

The danger of using biological weapons is growing significantly. The threat of impending or future use of biological weapons or of already used ones, whether secret or open and public, can be catastrophic. Fear, danger and the threat of their use have a powerful psychological effect on society, which clearly linked itself to the theory of hybrid warfare and appears to be another component of it.

The number of infectious agents, in contrast to the limited number of vaccines, can be used as biological weapons to a much greater extent, and this creates significant problems in the development, testing and implementation of new vaccines that should be administered before the onset of infection in doses that ensure immune protection and at the same time are harmless, stable and safe. Their development, testing and storage is very expensive, there is no real market for them, and they may never be used. And that is not the end of the story; through modern biotechnologies it is possible to change the antigenic characteristics of pathogenic microorganisms at any time, which can make vaccine stocks ineffective through genetic manipulation.

On the other hand, the production and sale of seeds from major crops or ready-to-eat products have the power to influence not only certain groups but also entire regions and countries. It is not difficult to imagine what a tool that is to subdue or destroy them. There is also the problem of market monopolization, which can affect any country under the control and absolute dependence of a single producer. While maintaining the current pace of production and distribution of GMOs in the foreseeable future, what is expected is that they will

displace and completely destroy natural organic products, which will be replaced by their modified counterparts, and the conquest of the food market can also be described as a weapon for mass destruction.

CONCLUSION

At present mankind is expecting the challenges, resulting from the growing risks and threats of attacks which, in the conditions of global conflicts, cold and hybrid wars, a record economic division between nations and social inequality, are unfolding in an increasingly powerful and unpredictable battle and are getting stronger.

The development of modern microbiology has allowed the creation and use of pathogens. The capabilities of biotechnology to improve the fighting qualities of a certain microbe and increase its striking power (causing mass morbidity and mortality) makes it difficult to diagnose, prevent and cope with it and makes treatment ineffective, too. Improving the fighting qualities achieved by deliberately selecting certain strains or by introducing genetic information into a pathogen, increases virulence, expands the spectrum of susceptible host species and shortens incubation periods. In order to overcome the created immune barriers of the hosts, its immunobiological properties are changed, its resistance in external environment against various drugs and disinfectants is increased and new ways of infection are created outside the usual mechanisms for a given infection.

Despite the development of modern microbiology, as well as the very nature of the biological threat, the world still remains relatively ill-prepared for this kind of impact, something we have all witnessed in the last few months in the context of the Covid-19 pandemic. Leaving aside the many theories about the origin of the new coronavirus, and regardless of whether it originated naturally or was deliberately created in a biological laboratory, whether it was consciously and purposefully disseminated or "dropped" by mistake or carelessness, the indisputable fact remains that from now on this virus, like other similar others, can be used as a biological weapon in the pursuit of certain high-level targets.

Unlike chemical attacks, in bioterrorism the result is not obvious and does not occur immediately. The effects are much more difficult to identify and are delayed, thus very often the first reported cases are not actually the first to be affected, allowing the disease to take on large proportions long before it is detected in a laboratory. In the long run, the likelihood of bioterrorist attacks being prevented is low. In order to achieve successful protection against major biological attacks and organisms with modified genetic composition, it is necessary to work towards progress in the development of vaccines, drugs, warning systems, training of specialists, as well as in the planning of procedures for immediate and timely response to emerging threats.

A key priority for the existence of any state is, first and foremost, to guarantee its sovereignty, integrity and independence. Hybrid wars, reinforced by threats of biological warfare or "*enriched*" with genetic engineering foods, are a set of elements used to assert a number of advantages that determine the nature of war and provide a wide range of opportunities for competing forces to face their opponent.

In counteracting all aspects of hybrid threats, it is necessary to build a strategic security framework that defines national interests and the policies for their implementation in a changing security environment. In this regard, it is necessary to conduct specialized training of professionals, to provide them with reliable information, which will allow a timely counteraction against bioterrorist attacks. Disease surveillance systems that have the potential to be used as biological weapons and be able to quickly identify the source of infection, proof and differentiation should be improved. The safety of laboratories storing or handling hazardous microorganisms and toxins in order to prevent them from falling in the hands of terrorist organizations should be ensured. It should be noted that the capabilities for countering biological weapons and bioterrorism are limited, and failures in disease prevention can have catastrophic consequences for the humans, the flora and the fauna. Close cooperation and collaboration should be ensured between institutions and states to strengthen the surveillance of the identification and announcement of each case, as well as to implement measures to limit and eradicate the disease. Last but not least, the fact that scientific developments can be used with various motives by ill-intentioned subjects should not be overlooked.

All of this has led to the conclusion that at the current stage of social development and in pursuit of certain political and economic goals, the threat of biological warfare, as well as the creation of laboratory-modified food, which can also be used as a weapon, are a powerful tool not only to exert a psychological impact on the population, but also for putting it under control.

These characteristics are essential components of hybrid warfare, requiring more in-depth study, although the topic of biological weapons should never be off the agenda.

Abbreviations:

- **BW** –biological weapon
- **GMOs** –genetically modified organisms
- **UNCCD** –The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxic Weapons and on Their Destruction
- **WMD** –weapons of mass destruction
- **UN** –United Nations
- **TNCs** - transnational companies

References

- Denchev, S. (2019). Information and security. Sofia, Za bukвите – O'pismenehy. ISBN:978-619-185-369-4-pdf.
- Dimitrov, D. (2015). Bioterrorism and biological weapons. *Bulgarian Medical Journal*, IX. № 2
- Lyutskanov, E. (2014). Hybrid "wars" - a reflection and an integral part of the global security environment. In: *Military Journal*. Sofia: Ministry of Defense, p. 103. ISSN 0861-7392
- Nachev, Y. (2014). GMO food as a weapon. Siela. Sofia. ISBN 978-954-28-1508-2
- Stoykov, M. (2014). Conceptualization of counteracting hybrid threats. In: *Military Journal*. Sofia: Ministry of Defense, p. 98. ISSN 0861-7392
- Stoyanov, N. (2016). Hybrid wars and nonviolent revolutions. „Iztok-Zapad”. Sofia. ISBN:978-619-152-885-1
- Tsvetkov, G. (2008). NATO concept of asymmetric military action. *Military Journal*. Volume 3.
- Lovelace, D. (2016). Terrorism. Commentary on security documents. Volume 141. Hybrid Warfare and the Gray Zone Threat. *Oxford University Press*.

Web-site

Biology Library. Available at:

[https://bio.libretexts.org/Bookshelves/Microbiology/Book:_Microbiology_\(Boundless\)/10:_Epidemiology/10.5:_Epidemiology_and_Public_Health/10.5G:_Biological_Weapons](https://bio.libretexts.org/Bookshelves/Microbiology/Book:_Microbiology_(Boundless)/10:_Epidemiology/10.5:_Epidemiology_and_Public_Health/10.5G:_Biological_Weapons), [Accessed June 2020].

Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological and Biological Toxins and on Their Destruction. Available at: https://www.mod.bg/bg/doc/cooperation/20181205_Biological_weapons_convention.pdf, [Accessed June 2020].

Dimitrov, B. Genetically modified products and the second "green revolution" (2010). *Journal Geopolitics*. Available at: <https://geopolitica.eu/spisanie-geopolitika/105-2010/broi2-2010/1346-genetichno-modifitsiranite-produkti-i-vtorata-zelena-revoljutsiya>, [Accessed June 2020].

Encyclopedia Britannica. Available at: <https://www.britannica.com/technology/biological-weapon>, [Accessed June 2020].

Encyclopedia Wikipedia. Available at: https://en.wikipedia.org/wiki/Biological_warfare, [Accessed June 2020].

Ivanov, Ya. Risk of terrorist and agro-terrorist attacks on the territory of Bulgaria and the readiness of the BFSA to counteract. (2015). Bulgarian food safety agents. Tsentar for shade at risk. Available at: [http://www.babh.government.bg/userfiles/files/Kontrol_na_riska/\(3\).pdf](http://www.babh.government.bg/userfiles/files/Kontrol_na_riska/(3).pdf), [Accessed August 2020].

Petrov, D. The history of biological weapons - from Odysseus to World War II. (2020). Available at: <https://www.chr.bg/istorii/priroda/istoriyata-na-biologichnoto-orazhie-ot-odisej-do-vtorata-svetovna-vojna/>, [Accessed June 2020].