

Special Brief on COVID-19



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COVID-19: Pandemic or a Biological Weapon?

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The onset of the Coronavirus (COVID-19) epidemic that has engulfed the entire globe has brought into question the conventional notions of security. It has affected all states small or large, developed or underdeveloped. The effects of the pandemic are just unfolding and the sheer magnitude of its after effects will occupy policy makers for decades. As of April 12, some 1.7 million people have been infected globally in over 200 countries with 100,000 deaths. And the numbers are rising. This puts a question mark over the utility of weapons that the world has been amassing for the better part of a century to secure itself. Has the world pursued the wrong model of security? Is it possible that pathogens are a bigger security threat that the world needs to arms against?

There have been a number of conspiracy theories going around that hint at the COVID-19 as a biological weapon, deliberately developed and disseminated. Plausible of course with countries working on developing biological and chemical weapons programs of their own. The theories range from the US accusing China of spreading it,¹ to the Chinese accusing the US of deliberate spread in Wuhan, as well as it being a plot by UK, US and Israel.² Iran has also accused the US of foul play saying the virus is genetically designed for Iranians.³ Some Western sources have claimed that Wuhan Virology Institute is linked to Beijing's covert bioweapon program.⁴ Chinese foreign ministry spokesman Zhao Lijian has claimed in a tweet that US military brought COVID-19 during Military World Games that took place in Wuhan in October 2019.⁵ At the moment both China and US seem to be embroiled in a war of narratives regarding the virus. US president Donald Trump insists on calling it the "Wuhan Virus" or "Chinese Virus."

It would be very difficult to determine whether there is any truth in the conspiracy theories going around or not. However, one thing is certain that if a pathogen can be developed that can be disseminated and controlled at will, it would be the ultimate weapon.

What are biological weapons? The World Health Organization defines these as microorganisms such as virus, bacteria, fungi and toxins that are produced and disseminated on purpose to cause death and disease in humans, animal and plants.⁶ There are some that occur naturally and others that are developed intentionally as tools of warfare. There are a number of known pathogens that

¹ "US-China Spar over Coronavirus," *Al Jazeera*, March 23, 2020,

<https://www.aljazeera.com/news/2020/03/china-spar-coronavirus-origin-200323194730719.html>

² "Former Pakistani Foreign Minister shares strange theories about coronavirus," *Geo News*, March 28, 2020,

<https://www.geo.tv/latest/279588-former-pakistani-foreign-minister-shares-strange-theories-about-coronavirus>

³ "Iran leader refuses US help; cites coronavirus conspiracy theory," *Al Jazeera*, March 23, 2020,

<https://www.aljazeera.com/news/2020/03/iran-leader-refuses-cites-coronavirus-conspiracy-theory-200322145122752.html>

⁴ "Coronavirus may have originated in lab linked to China's biowarfare programme," *Washington Examiner*, January 26, 2020.

⁵ "Chinese diplomat promotes conspiracy theory that US military brought coronavirus to Wuhan," *CNN*, March 14, 2020, <https://edition.cnn.com/2020/03/13/asia/china-coronavirus-us-lijian-zhao-intl-hnk/index.html>

⁶ "Biological Weapons," https://www.who.int/health-topics/biological-weapons#tab=tab_1

can be used deliberately to cause death and disease including agents like anthrax, botulinum toxin, plague, cholera, ebola and smallpox, just to name a few. Methods of dissemination range from contaminating food and water supplies, through aerosols methods or by releasing infected vectors like flies and mosquitos.

Many states have developed biological weapons programs over the years. Several European countries developed bioweapons in the early part of the 20th century. Germany used bioweapons in First World War and Japan in the Second World war. The US and Soviet Union had extensive biological weapons programs during the Cold War, so did the United Kingdom. However, they gave up their biological weapons programs in 1960s and 1970s.⁷ This paved the way to the conclusion of the Biological and Toxin Weapons Convention (BTWC) in 1972, which bans the development, production, acquisition, stockpiling and retention of biological and toxin agents for weapons purposes. It complements the 1925 Geneva Protocol, which prohibits the first use of biological and chemical weapons. Today, BTWC has 183 signatories and 109 ratifications,⁸ but fears remain of clandestine programs because they are relatively cheap to produce and easy to hide. Also, the BWTC has no standing organization or effective verifications mechanisms.

While most of these countries have formally given up biological weapons, many retain large biodefence programs. US have one of the largest biodefence programs. There is a fine line between offensive and defensive programs which essentially comes down to intent. So, defensive research in US and other countries can also be used for offensive purposes.⁹ The BWTC does not prohibit research for defensive purposes. Thus, many countries have programs for producing vaccines, antivirals and antibiotics. Secrecy surrounding biodefence programs create suspicions that they may in essence be offensive in nature. Also, great advances in biotechnology and genetic engineering mean that there is potential for misuse of the technology to create infectious viruses that are resistant to medicines or create weapons that only target certain genes and races.

Thus, in practice if COVID-19 was indeed a biological weapon it would be very difficult to detect and attribute blame. Also, this means that pathogens have been developed for weapons purposes in the past and there may still be state-sponsored secret programs that exist in the world today. If such programs exist, then their use by state or non-state actors cannot be ruled out entirely. How are COVID-19 pandemic and other possible outbreaks in future likely to impact on the security structures and dynamics around the world and the various regions?

At the global level, traditional rivalries and threat perceptions would not disappear. Major powers like US and Russia, and perhaps China, already have arms races going in conventional, nuclear and space realms. This will endure for the foreseeable future. However, states will likely now invest heavily in biowarfare and biodefence research to defend and safeguard against future pathogens that may be disseminated as agents of warfare. Given the immense and widespread effects of the COVID-19 pandemic, it will have a profound effect on how states views security in future. Military industrial complexes may perhaps be replaced by “Medical Industrial

⁷ “Ghazala Yasmin, “Biological Warfare: Developments and Implications,” *Strategic Studies*, Vol. 27, No. 2 (Summer 2007), pp. 130-151

⁸ “Status of BWTC,” <http://disarmament.un.org/treaties/t/bwc>

⁹ Ghazala Yasmin, “Biological Warfare: Developments and Implications,”

Complexes”¹⁰ with investment in R&D against vaccines for potential pandemics. Overall, biological weapons would take priority in any future offensive or defensive strategic calculus.

Biological weapons are very much part of global security threat landscape. In fact, they have been called the poor man’s atomic bomb because they are relatively easy to develop and disseminate and offensive programs are easy to hide. Many countries are suspected of keeping clandestine programs, others maintain large biodefence programs that have the potential to be used for offensive purposes. Since the programs exist the potential for their use also exists – by state actors and also by terrorists. However, it is highly unlikely that the present COVID-19 pandemic was deliberately spread. At the same time, because the potential and capabilities to cause pandemics and disease as acts of war exist across the world, the threat of bioweapons in future cannot be ruled out entirely. It appears that the biggest threat to humanity yet may come from biological agents – whether man-made or natural. The world needs to focus on how to prevent and fight pandemics like the COVID-19. Thus, there is need to strengthen international law that regulates offensive use of biological agents, and develop transparent, stringent verification mechanisms for the existing BTWC.

¹⁰ Adil Sultan, “Post Covid-19 World Order: How Different Will it Be?” April 2, 2020, <https://strafasia.com/post-covid-19-world-order-how-different-will-it-be/>

Combating Coronavirus Pandemic through Military Technologies

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The international system is witnessing an unprecedented and horrifying time. The governmental institutions of many countries have failed to predict, manage and control the coronavirus pandemic. At this moment, an extremely pertinent issue is to find effective and speedy solutions to save states from a total collapse. How the existing and emerging military technologies could be used to fight against this pandemic is a crucial dimension to look at.

The United States of America and Russia also postponed the meeting of the Bilateral Consultative Commission (BCC) under the New Strategic Arms Reduction Treaty (New START).¹¹ The tenth Review Conference of the Nuclear Non-Proliferation Treaty (NPT) has been postponed due to coronavirus pandemic.¹² A biological threat which used to get international attention once in a blue moon, has now overshadowed the nuclear issue - the cornerstone of international arms control and disarmament regime. The great powers are already impugning each other of biological warfare. The way this pandemic has highlighted the fragility of multilateralism and global cooperation indicate an altered global order in the post-corona era.¹³ This altered global order will surely affect the other key areas of international arms control and disarmament regime. Regulating the research, development, testing, production and potential use of existing and emerging military technologies is one of these key areas. As a majority of these military technologies are dual-use in nature, they could be temporarily redirected to speed up the tracking, diagnosis and treatment of the coronavirus patients.

The Global Navigation Satellite System (GNSS) which is not only the key component of various advanced weapon systems but also a backbone of advanced intelligence, surveillance and reconnaissance (ISSR) capabilities, could be employed to track the coronavirus patients. Furthermore, it can contribute to the analysis of outbreak patterns and predicting the scale of infection through precise geographical mapping. The geocoding of affected areas through satellites will facilitate authorities in relief work e.g. supplying food items and medicines, the establishment of hospitals and quarantines.¹⁴ The integration of cloud computing and artificial intelligence (AI) with GNSS will speed up the detection and monitoring of patients. AI can also facilitate doctors in accurate diagnosis through smart image processing.¹⁵ The Chinese business

¹¹ "Russia, US halt inspections under New START due to coronavirus outbreak," *TASS*, March 29, 2020, <https://tass.com/defense/1137069>.

¹² Daryl G. Kimball, "NPT Review Conference Postponed," *Arms Control Today*, April 2020, <https://www.armscontrol.org/act/2020-04/news/npt-review-conference-postponed>.

¹³ Henry A. Kissinger, "The Coronavirus Pandemic Will Forever Alter the World Order," *The Wall Street Journal*, April 3, 2020, https://www.henryakissinger.com/articles/the-coronavirus-pandemic-will-forever-alter-the-world-order/?fbclid=IwAR2eg9HKVL51FbOvRd6dxYgBkHX_ezXZNZLQ9C8GE71jPooWUxh3hLPnozo.

¹⁴ "The China way: Use of technology to combat Covid-19," *Geospatial World*, April 8, 2020, <https://www.geospatialworld.net/article/the-sino-approach-use-of-technology-to-combat-covid-19/>

¹⁵ Bernard Marr, "Coronavirus: How Artificial Intelligence, Data Science and Technology Is Used to Fight the Pandemic," *Forbes*, March 13, 2020, <https://www.forbes.com/sites/bernardmarr/2020/03/13/coronavirus-how-artificial-intelligence-data-science-and-technology-is-used-to-fight-the-pandemic/#513c4aaf5f5f>.

giant Alibaba has already developed a new computerized tomography (CT) scan system which can detect the presence of the virus within 20 seconds with 96 per cent accuracy. Approximately 26 medical facilities in China are using this technology. Technological giants are also looking forward to accelerating the vaccine development through AI-enabled gene sequencing.¹⁶

During the outbreak of such infectious disease, drone technology can enhance compliance with the rule of social distancing. Drones or autonomous vehicles which used to drop weapons could also drop medical supplies and food items in the affected areas. Drones could also be utilized by law enforcement agencies to ensure public compliance. They can also be used for disease awareness campaigns and public announcements. The thermal/Infrared temperature detection technology which has wide defense applications e.g. military aviation, night-vision, guidance heads for missiles, could be used to enhance patient detection. The world is facing a shortage of critical medical equipment like ventilators and protective gears. The advance materials and 3D printing technology can reduce the supply and demand gap. In collaboration with the private sector, the US Navy has already started the manufacturing of critical supplies e.g. face masks, parts of medical equipment through 3D printing. This initiative was taken at the request of the “Federal Emergency Management Agency (FEMA) Region VIII” and involves “nine Department of Navy (DON) commands.”¹⁷

Countries across the globe are using military technologies against coronavirus epidemic and coming up with innovative ways of strengthening the national health care system.

Pakistan is also looking for technological solutions to a biological threat. Tracking coronavirus patients through GNSS and mobile devices is a doable task for the relevant institutions in Pakistan. According to Pakistan Telecommunication Authority (PTA), there are 165.5 million cellular subscribers in Pakistan.¹⁸ The cellular teledensity was 79/100 in December 2019.¹⁹ The Ministry of Information Technology and Telecommunication has started the development of a mobile application in collaboration with the National Information Technology Board (NITB). This application will use radius alert and location services to identify and track coronavirus patients. It will also contain public awareness material and alarm system for taking protective measures.²⁰ However, this initiative should also take into account the ethical and moral dimension. The principles of privacy and personal information security should be strictly followed to avoid any inadvertent misuse of personal data.

¹⁶ “China’s giants from Alibaba to Tencent ramp up health tech efforts to battle coronavirus,” *CNBC*, <https://www.cnbc.com/2020/03/04/coronavirus-china-alibaba-tencent-baidu-boost-health-tech-efforts.html>

¹⁷ United States of America, Department of the Navy, Naval Air System Command Public Affairs, *Navy, Marine Corps Partner With Industry, FEMA to 3-D Print Face Shields* (NNS200402-10), last modified April 2, 2020, https://www.navy.mil/submit/display.asp?story_id=112514&utm_source=twitter&utm_medium=social&utm_content=100001213388780&utm_campaign=Equip.

¹⁸ Government of Pakistan, Pakistan Telecommunication Authority, *Monthly Cellular Subscribers*, last modified December 2019, <https://www.pta.gov.pk/en/telecom-indicators/1>.

¹⁹ Government of Pakistan, Pakistan Telecommunication Authority, *Monthly Teledensity*, last modified December 2019, <https://www.pta.gov.pk/en/telecom-indicators/2>.

²⁰ “IT Ministry to Develop App to Detect Corona Patients,” *The Nation*, March 20, 2020, <https://nation.com.pk/20-Mar-2020/it-ministry-to-develop-app-to-detect-corona-patients>.

Under the Section 131- A of CrPC and Article 245 of the Constitution of the Islamic Republic of Pakistan, the armed forces of Pakistan are already cooperating with the provincial governments in their fight against the infectious disease.²¹ However, the government of Pakistan should also devise a strategy in collaboration with the relevant institutions on how the key military technologies and trained human resources at the defense production facilities of Pakistan could be temporarily utilized to enhance the domestic production of medical equipment and protective gears. Like other countries, Pakistan is also going through extraordinary times which call for extraordinary measures. The timely and efficient deployment of existing and emerging military technologies will not only rescue millions of life but also provide an advance infrastructure for biological threats in the future.

²¹ “Coronavirus crisis: Government calls in Pakistan Army troops,” *The News*, March 23, 2020, <https://www.thenews.com.pk/latest/633408-govt-summons-pakistan-army-to-curb-coronavirus-spread>