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Advanced Principle of Psychological Attack Using Biological Warfare

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Introduction

Biological, chemical, and nuclear warfare are deeply embedded in the history of world conflicts. Since ancient times, the search for tactical warfighting and wartime advantages has been written. A chemical weapon can be traced back to the time of BC when the "Southern African San society" used snake poison for hunting antelopes. Among the first suspected uses of chemical compounds during the war was during the Romans and Persians war in 256 years. According to studies, the Persian military exposed their counterparts to poisonous chemical compounds, destroying them before facing them on the battlefield. It goes unnoticed that Persians used sulfurous gas in the tunnels to kill some Roman soldiers through asphyxiation. This backward method was among the first biological material used as an offensive weapon during the conflict. It was a century before the Geneva conventions outlawed using weaponized chemical weapons. The word can also mean typical images during the medieval warriors tossing dead animals over the city wall or even the government's undercover agents secretly releasing unknown microbes to the enemy territory. Of course, chemical weapons do not comprise such activities. However, the main components of a biological weapon are more mundane. For many years, organisms have gradually devised ways to kill each other. Any organism that produces toxins engages in the form of chemical or biological weapons. People who engage in chemical warfare use the chemical-producing creature's advantage. This chapter provides background information about biological weapons, developments that impact biological weapons proliferation threat, existing non-proliferation tools, and various chemicals non-proliferation policy actions.

Body

Early in history, adversaries started trying to harvest disease for reasons of war; however, they often went through challenges in making an effective disease as a tool of war. Naturally occurring diseases that kill people, plants, and animals are the beginning point for such chemical or biological weapons (Inglesby et al., 1999). These diseases were derived from fungi, toxins, and bacteria. Non-contagious and contagious diseases like anthrax and plaque can be turned into biological; weapons. During medieval times, military commanders tried to harm their enemies by contaminating their water supplier with carcasses of humans and animals that died from dangerous infectious diseases or, like early stated, throwing bodies over walls of enemy cities (Boscarino et al., 2003)). In current warfare, nations have used diseases sparingly. The most known case goes back to World War II when the imperial Japanese army unleashed cholera, plaque, and typhoid diseases on the China civilians, killing several thousand. To use biological compounds today, aircraft bombs, missiles, rudimentary delivery sys-

tems, and artilleries can be used (Cieslak, 2001). The delivery of aerosol chemical and biological compounds using ultra-fine particles that could be inhaled poses a significant risk of many causalities. Attacking the human population can also be done using deliberate food supply contamination because infections occur easily and quickly by ingesting. Abrasions and cuts on the skin's surface could also be a route for exposure to multiple infections of biological attacks.

The susceptibility of chemical and biological compounds to meteorological conditions like ultraviolent rays can quickly cause death. It complicates the ability to execute an effective chemical weapon attack (Al-Agamy, 2011). Compounds can be hardened against some meteorological complications, but shifting according to the direction of the wind can still blow the agent away from the target. Nevertheless, these weapons can be used strategically and tactically. Tactically, a command post can be attacked with a non-contagious biological disease to take an adversary down in military leadership. A strategic attack can target even a large metropolitan area with a contagious disease (Whitby & Rogers, 1997). Eventually, a pandemic could bring down so many people that the military can no longer be sustained since they are not getting enough supplies such as ammunition, food, and other necessities. Targeting civilians deliberately completely goes against the Geneva convention principle of war. However, the devastating impacts of biological warfare could be because of multiple reasons that find using biological and chemical weapons attractive (Warner et al., 2011). Others might include the ability to offset their enemy nuclear or conventional military power with biological weapons. The technicality and ease with which these weapons can be acquired compared to nuclear weapons makes it easy to create a biological weapon covertly. One of the research questions broaches this issue of the proliferation problem.

The possible integration of advanced technology in chemical and biological weapons interest and programs of sub-national actors in this warfare could create quantitative and qualitative proliferation quandaries (Szinicz, 2005). The rate of discovering the science in life for the last few years is astonishing, from the knowledge of altering genetic material artificially to the human genome and disease pathogenesis besides transferring it from one organism to another. Therefore, genetic engineering can be used to make diseases resistant to medical treatment and vaccines, making the effects even more contagious and lethal. With technological development, scientists cab also fabricates segments of disease materials to make biological weapons (Szinicz, 2005). Revolution in life science shows that there is no sign of abatement. Many quality-of-life and life-saving enhancing developments will emerge from laboratory science in years to come. Still, potential abuse of new equipment and technologies and knowledge about malevolent goals will always be present.

A drastic change from the traditional practices of acts of violence started to instigate sympathy for a party's political reason. In the past couple of years, two sequences in terrorist activities have realized a possibility that some people will turn into biological weapons as their best method of going to war (Szinicz, 2005). The initial trend is some groups' proven intention to cause the highest number of causalities with absurd methods of attacking. Secondly, it is the growth in incidents where a terrorist is planning to use biological attacks by obtaining biological agents, trying to reproduce and use them on civilians. Currently, attacks that show a clear indication of biological warfare are atypical. For instance, the 2001 anthrax attack is a good example (Szinicz, 2005). At some point, taking advantage of the developed technology, some groups might overcome the technical challenge to attack a significant number of civilians using biological weapons. At that point, the number of deaths and injuries from the attack could be significantly high.

Two main international accords were designed to contend with the risk of biological or chemical weapons at a nation-state level. The deliberate use of biological weapons was so vile that the international community burned its use in the Geneva convention, consequently outlawing using poisonous gas (Stokes & Banderet, 1997). The components of the proliferation regime are the "Biological and Toxin Weapons Convention (BWC)," which prohibited the production, development, and use of deadly weapons. In contrast to these laws, the Soviet Union ramped its biological and weapon programs and hid them inside commercial activities. They also engineered multiple diseases like plague, smallpox, and Marburg, diseases that nullified vaccines and treatments (Russell et al., 2003). Many of these activities and facilities are now engaged in peaceful studies with foreign experts, trying to establish commercial activities. Still, the country's refusal to allows people from outside into military institutions concerned that remnants of biological weapons have not been destroyed.

Moreover, United States intelligence has highlighted biological proliferation worries about Russia, Syria, and North Korea. However, Iraq is the only country confirmed to have had biological weapons programs ongoing in recent times (Ritchie & Owens, 2004). In the last few decades, the international community had conveyed a group of professionals to analyze what could have been done to monitor BCW. The dual-use method of biological gear and materials, besides the difficulty in distinguishing legal defence practices from illegal offensive, is amid the obstacles experienced (Ritchie & Owens, 2004). Talks about creating a legally binding monitoring process that had begun earlier, culminating in a draft agreement that the United States refused, stating that it was not enough to establish a treaty of compliance, which could compromise important defense prosperity and information.

The character of biological warfare is now going through a significant alteration. These changes are derived from society and science, very parallel developments. Biological security is shifting from weapons of mass demolition to a sphere of info conflict where targeted small- scale attacks might have a huge impact on the victims (Richards et al., 1999). Future biological wars might even use the same strategies to exact confusion and shock on their counterparts using a mere threat of casualties, increasing the previous disadvantage of biological and chemical warfare (Richards et al., 1999). Rapid advancements in science and biology may be widened to defend against these attacks. The element of surprise is important for during an attack using biological weapon, and fairly easy to achieve. The small amount of the toxic compound needed for an attack, will spray several miles to the target group making the weapon more difficult to detect while using aerosols. The uncertainty nature of manifesting symptoms can mask the beginning of an outbreak and enhance a possibility that they catch more people adversely not prepared.

In the current era, large-scale partisan battles will be affected by equipped scuffles but will include humanity at large. Encounters of psychological manipulation will intensify, while secluded conflict may be a reality (Reyna, 2004). Fear of a health predicament can be why a whole nation goes into chaos, opening up the country to external risks. For instance, an epidemic of contagious disease can compel people to live and work in a digital domain where they will be subtle to technical breakdowns and cyberattacks (Ramesh & Kumar, 2010). However small, it is clear that biological attacks will still reach their effects at a tactical equal by changing the aim for biological weapons ways from the combat military towards the whole community (Ramesh & Kumar, 2010). To bring an authentic physical consequence, an incomplete number of attacks may need a basis in the real action of a devastating landscape. Considering this, the achievement of future biological attacks in the risk zone conflict is dependent on stressing the significance that the toxic substance appears contagious, which will initiation doubts of enormous spread.

Because of the target method of operation, future biological warfare may surround most of the challenges that prevented biological weapons from getting to strategic impact from the past (Hedén, 1967). Large deployment and production of biological toxins may be useless. Placement on an enormous gage to get to a strategic advantage on the battleground required that weaponized compounds were ecologically friendly. They had to be paired with a transfer scheme that could yield a massive explosion (Koblentz, 2003). This element was a challenge to keep toxic weapons a secret besides demanding a considerable investment in infrastructure. In difference, since even minor eruptions can cause strategic impacts, future bioweapons production can be produced in academic or industrial molecular biology as long as these conveniences are open to international inspection.

Moreover, the armamentarium of biological weapons will widen its range of valuable biological compounds. Many definitive plans in biological combat have been limited to ordinary compounds such as pathogens, with the help of the “Soviet Union” near to its end. This has reduced the range of pathogens so that countermeasures could be well premeditated. This disadvantage is now being counterbalanced on a protection scale by the gradual expansions in biology and technology (Inglesby et al., 1999). Animal cells and infectious agents can now be built from as simple as a laboratory. Biological weapons in biotech are improving, and the determination of such operation could vary and include palpable developments of armaments. However, manipulation can be extensive and contain mutation primer that allows move from animals to people or a nucleus that codes nonlethal effects. It might even be possible to paradigm functions for overdue signs, allowing wide distribution from one person to another (Inglesby et al., 2002). Therefore, the victims will seek medical services in places where medical services are offered. Such prolonged attacks would cause a quarantine, and other efforts for coordinating responses to a crisis difficult.

Fundamental studies on food insecurity are subtle for surrogate and economic biological warfare. Conflict on shared resources in some nations is a commonplace. Food security, human health, and environment management are consciously threatened, globally and regionally, by simple water reserves (Marchant et al., 2011). Other constituents are within the model of a real-world view of food security and biotechnology, waterlogging, salinization, and over-cultivation (Mauroni, 2007). Deliberately contaminated herbicides, food, pesticides, and using arable land to produce food is another component of food insecurity. Moreover, emerging and new plant infections affect agriculture sustainability and food security, increasing malnutrition in a country rendering its people susceptible to human diseases. Deliberate release of pathogenic and harmful organisms that destroy an enemy's reserves and cash crops comprises an effective biological warfare weapon (Noy, 2004). Warfare involving herbicides and biological agents is anticrop warfare that results in famine, the decimation of agriculture- based economy, malnutrition, and food insecurity.

On large-scale attacks, self-protection may not be needed any longer. Using classic weapons, biological weapons have rested on conditions that must be prevented or treated for the enemy's military (Petro et al., 2003). Keeping the outbreak targeted and small may surround this issue. Moreover, compounds with high morbidity and high lethal content, and easily containable toxins can be advanced in the laboratory of a more benign to be more contagious (Bazarkina, 2019). Recent developments in biology may also ease the outbreak restraint. Though still argued as to its viability, this cannot be exempted from that increase in the accessibility of information on people gene disparity that could target precise individuals, ethnic grouped based on their genes. As an extra safety precaution, an attacker may fix for a large-scale vaccine in contrast to an attack by a pathogen (Harris & Paxman, 2002). The Covid pandemic has shown that a vaccine can be manufactured quickly. Ironically, if the enemy escapes attributing while giving a timeline vaccine for the affected, the attacker might be successful in creating great publicity on their side of the conflict.

Factors previously discussed all led to dissolving the tension made by biological war challenging to practice. However, one aspect that may retain its character as an obstacle contrary to organic attacks; is their morals when focused against civilians. This challenge may be heightened in current battles of the aspect (Franklin, 2018). Realistically, if a biological attack is bound to happen, it is vital to ensure that someone else gets the fault. Bringing mix- up about the initials of a prompted contagious occurrence could be the answer to planned accomplishment. The attribution and accountability can be problematic by changing the making of bioweapons from the state government to individually industry (Patel et al., 2019). The current global economy, where international tech firms are used as cover for the production of chemical and biological are increasingly getting connected with huge research organizations and nongovernmental institutions, provides a perfect condition to develop biological and chemical weapons under biomedical research (Patel et al., 2019). One may have to foresee that future antagonist will blend nonstate and state actors using biological and chemical weapons to their advantage.

A biological weapon is unique in its delayed effects and visibility. These two factors allow the military to cause confusion and inculcate fear among their victims besides escaping undetected (DiGiovanni, 1999). An attack using a biological weapon would cause fatal deaths or sickness in large numbers and create panic, anxiety, and uncertainty. Its objective is disruption of economic and social activities, impairment of military response, and breakdown of a government authority. Evident in the anthrax attacks in the aftermath of the World Trade Centre attacks, the occurrence of a few numbers' infections could create a substantial psychological impact until people feel vulnerable (DiGiovanni, 1999). Choosing biowarfare compounds is dependent on the technical, economic, and financial capacities of an organization or state. Ebola, smallpox and anthrax are the most used biological weapons because they have a devastating reputation for causing horrific sickness (DiGiovanni, 1999). Images of law enforcement personnel and doctors in full gears for protection alone could cause widespread public panic, anxiety, and distractions.

Today, attacks using biological weapons are possible. The public and the medical community should be familiar with control measures and epidemiology to increase the likelihood of a reasoned and calm response if an outbreak occurs (Ganesan et al., 2010). Moreover, the principle that enables clinicians to develop strategies against such attacks is essential as the health community system considers the issue a proliferation (Ganesan et al., 2010). Further knowledge through education emphasizes recognizing that vulnerability is both necessary and timely. Prevention rest on developing a firm hold on the global norm, rejecting the development of any biological

weapons (Cooper, 2006). This implies that early prompt and detection treatment of signs is a secondary measure. The medical society plays a significant role in secondary measures by taking part in reporting and surveillance, thus providing information that biological warfare is being used. Consequently, continued studies to improve surveillance and research for enhanced effective response plans, therapeutic compounds, and diagnostic capabilities will strengthen prevention measures.

Conclusion

In conclusion, it is a warning; it is crucial to keep a civil and stable tactic when entering a different era of preparedness. Over vigilance amid most government agencies to biological and chemical warfare can be risky in itself, carrying vulnerability that a relative natural outbreak of pathogens can cause lockdowns, which prevent other elements of protection, risk attenuating the response, and proving financially costly once a risk arises. Discovery out with high and fast accuracy what instigated a set of diseases and suspicion before it becomes critical will be effective. Ramping intelligence in medicine tries to include the frontline method and tops molecular biology professionals with prominent significance. Finally, the role of tertiary prevention by reducing disability from diseases caused by biological weapons should not be forgotten. While BWC is ready to help affected nations, medical help must be prepared to go through sequelae should an unthinkable happens.

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