

Biological Warfare's Role in Colonization

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Abstract

When reflecting on colonization, physical warfare and indoctrination are discussed, although the role of biological warfare is often undermined. The role of biological warfare in colonization efforts by the British, Spanish, German, African, and Japanese is continually debated by historians. Some historians mention the insignificance of certain biological warfare methods as being ineffective at afflicting the desired group, while other historians attest that the innate cruelty of the colonizers and the high death count impacted these power struggles greatly. Although most biological warfare events occurred as an attack on another country, there are also instances of warfare being conducted on a country's own people. Despite the majority of attacks having happened in the 1700s - 1900s, there are many lessons that can be learnt from these brutal acts of violence. We hope to evaluate both sides of this topic through the lens of colonizers in different countries and different timeframes to uncover the true role of biological warfare in colonization efforts.

Introduction

Biological warfare, also known as bioterrorism, is an intentional release of biological agents (virus, bacteria) to cause illness or death (U.S. National Library of Medicine, 2021). From the beginning of history when the Hittites sent infected rams to their enemies to modern day with the 'anthrax letters' being sent after the 9/11 attacks, this system of warfare has been crucial to shaping society (Greub, n.d.). As biological warfare started to

become a strategic method to defeat the enemy, it also influenced colonial power struggles and possibly aided colonizers in conquering vulnerable populations. At certain points, it may have also helped indigenous peoples overcome their conquerors. Regardless of the reason, it is undeniable that although in certain continents deaths from war have decreased tremendously, there are also areas where the rate of war has increased greatly (Figure 1). The following sections will provide anecdotes, controversy, and reflections about bioterrorism's effect on colonialism specific to each continent.

Europe

One of the most notable mentions of early biological warfare is the 1346 Siege of Caffa, when diseased Mongol forces catapulted troops infected with the Black Plague into the besieged city. From there, it is suspected to have transmitted to people near Crimea due to infected Italians fleeing the area (Centers for Disease Control and Prevention, n.d.). This is supported by the narrative of Gabriele De' Mussi, who describes "The dying Tartars, lost interest in the siege. But they ordered corpses to be placed in catapults and lobbed into the city in the hope that the intolerable stench would kill everyone inside." (VJ, 1966). Although there are no other sources that could corroborate this description, his account seems plausible to numerous historians after cross referencing art pieces, mortuary records, and a modern analysis of the situation. Despite the Mongols enacting biowarfare after their inevitable loss at the Siege of Caffa, their

efforts would lead to the Black Plague epidemic in Europe. The consequences would be enormous, with almost one third of Europe's population demolished, and it arguably led to the end of the Holy Roman Empire (Choi, 2013).

More recently, during World War I, during Germany's colonization attempt of Europe, they sent infected Horses with anthrax or glanders to the Allies (Roffey, Tegnell, Elgh, et al., 2014). However, since these actions did not have military consequences, they are often disregarded as minor in the war effort. During World War II, European countries would become involved in biological warfare research, although many of these efforts are argued to be minor in the war effort since they were never enacted. Some examples are rinderpest, anthrax, botulin, and Salmonella, which were tested in bombs off the coast of remote islands. However, it is suspected by some historians that these findings could have been pivotal in the war, since most data was destroyed by the end of the war or not released to the public (Roffey, Tegnell, Elgh, et al., 2014).

Asia

Asian colonization was categorized by European and Japanese imperialism, specifically within the Middle East, the Indian Subcontinent, and Southeast Asia (Encyclopædia Britannica inc, n.d.). Since the beginning of European colonization in East Asia, there have been unintentional transfers of disease. Most notably, in China malaria would eventually affect more than 30 million people annually by the mid 1940s (Park, 2011). Due to the devastating effect of malaria on weakening their people and the country, Hong Kong created numerous antimalarial efforts and became one of the first leaders in public health and disease prevention.

As Japanese imperialism advanced in World War II, there were increasingly unethical experiments being performed on the colonized individuals. For instance, many people from China were kidnapped and infected with disease, then dissected to view how said disease affected the body. These research experiments were used to

help the Japanese develop plague bombs and aided in their plans to colonize Asia (Nicholas, 1995). These plague bombs were later dropped on Chinese cities to see how effective they were at creating pandemics. The unique Japanese example demonstrates how biological warfare not only aids colonizers with suppressing vulnerable groups, but also leads to increased knowledge in science and inevitably progresses understanding about the world.

During the Korean War, the United States was also controversially suspected of dropping bombs containing fleas over devastated Korean battlefields to spread plagues ravaging the area such as typhus (JAMA, 2011). However, these accounts are opposed by historians who attest that these diseases were endemic to the area and that these stories were rumors meant to spread propaganda against the United States.

Africa

Africa has faced colonization by various countries over the years including Britain, France, Spain, and more. However, to most historians the most shocking instances of biowarfare in the continent are those done to their own citizens. Although not officially motivated by colonialism of another country, it can be argued that the South African apartheid biowarfare program was an attempt to colonize and suppress their own people. The program named Project Coast included "human experiments, plots of mass murder using poisoned beer and anthrax, assassinations attempts through poisoned clothes, tampered tools and exploding letters" (Chutel, n.d.). The victims of these projects were South African residents who spoke out against Apartheid including Desmond Tutu, who received a threat of an experimented baboon fetus due to his human rights activism.

The Americas (North America and South America)

One of the most famous instances of colonialism is the Spanish and British conquest of the Americas. There has been a contended debate

on whether Gen. Jeffrey Amherst infected local Native Americans with items from a smallpox hospital (Fenn, 2000). Although the idea is implied in one of Gen. Amherst's letters, it is still uncertain, and the smallpox infected Native Americans could have arisen from many other avenues. However, the idea of infecting Native Americans with infectious disease in the start to taking over the area was not a new notion. In fact, one account states, "we gave them two Blankets and an Handkerchief out of the Small Pox Hospital. I hope it will have the desired effect" (Frischknecht, 2003). This cryptic message suggests that the infection was deliberate and part of a methodical plan to harm the native population.

More recently during the 1950s, biological warfare was tested on United States' residents to prevent a possible colonization attempt overseas. The military sprayed a fog with potentially harmful microbes into San Francisco to see how a biological weapon would affect the 800,000-resident city (Loria, 2016). One patient died from *S. marcescens* as an infection spread to his heart. Although this instance was meant with positive intentions to deter possible biowarfare attacks through knowledge, it provokes scientists and historians alike to consider the ethics of such testing on a country's own citizens.

Conclusion

Biowarfare has been around since the beginning of humanity, and has continued to become an important topic of discussion in modern society. The impact of biowarfare cannot be understated as it has shaped society, especially with colonization, whether offensively or in attempts to deter attacks. These instances emphasize the importance of more discussions on the ethics of such actions and the regulations or transparency governments should maintain with their residents. Especially with government internet security and the controversial handling of Covid-19 by numerous countries at the forefront of the conversation, these are crucial questions to ask for the safety of future generations.

Acknowledgement

I'm extremely grateful for my mentor, Laura P. Gelfman, who guided me through the research process and whose unwavering support pushed me forward. I would also like to recognize the role the IYRC Summer Program on Medicine and Research played in introducing me to health care research.

References

- Biological Warfare. (1999). *JAMA*, 282(19), 1877. <https://doi.org/10.1001/jama.282.19.1877>
- Centers for Disease Control and Prevention. (n.d.). Biological Warfare at the 1346 Siege of Caffa - Volume 8, Number 9-September 2002 - Emerging Infectious Diseases journal - CDC. Centers for Disease Control and Prevention. https://wwwnc.cdc.gov/eid/article/8/9/01-0536_article.
- Choi, C. Q. (2013, May 10). Plague Helped Bring Down Roman Empire, Graveyard Suggests. LiveScience. <https://www.livescience.com/29498-plague-helped-destroy-roman-empire.html>.
- Encyclopædia Britannica, inc. (n.d.). Patterns of a colonial age. Encyclopædia Britannica. <https://www.britannica.com/topic/history-of-Southeast-Asia-556509/Patterns-of-a-colonial-age>.
- Chutel, L. (n.d.). Decades later, apartheid South Africa's chemical and biological weapons program is still hidden. Quartz. <https://qz.com/africa/822837/south-africas-apartheid-era-chemical-and-biological-warfare-poisoned-pasts-exhibition/>.
- Fenn, E. A. (2000). Biological Warfare in Eighteenth-Century North America: Beyond Jeffery Amherst. *The Journal of American History*, 86(4), 1552. <https://doi.org/10.2307/2567577>
- Frischknecht, F. (2003, June). The history of biological warfare. Human experimentation, modern nightmares and lone madmen in the twentieth century. *EMBO reports*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1326439/>.
- Greub, G. (n.d.). History of biological warfare and bioterrorism. CORE. <https://core.ac.uk/reader/82539091>
- Loria, K. (2016, September 25). Over and over again, the military has conducted dangerous biowarfare experiments on Americans. Business Insider. <https://www.businessinsider.com/military-government-secret-experiments-biological-chemical-weapons-2016-9>.

- Nicholas. (1995, March 17). Unmasking Horror -- A special report.; Japan Confronting Gruesome War Atrocity. The New York Times.
<https://www.nytimes.com/1995/03/17/world/unmasking-horror-a-special-report-japan-confronting-gruesome-war-atrocity.html>.
- Park, Y. (2011). Ka-che Yip (ed.), Disease, Colonialism, and the State: Malaria in Modern East Asian History. *East Asian Science, Technology and Society: An International Journal*, 5(1), 123–125.
<https://doi.org/10.1215/18752160-1264965>
- Roffey, R., Tegnell, A., & Elgh, F. (2014, December 11). Biological warfare in a historical perspective. *Clinical Microbiology and Infection*.
<https://www.sciencedirect.com/science/article/pii/S1198743X14626343>.
- Roser, M. (2016, December 13). War and peace. Our World in Data. <https://ourworldindata.org/war-and-peace>.
- U.S. National Library of Medicine. (2021, May 21). Biodefense and Bioterrorism. MedlinePlus.
<https://medlineplus.gov/biodefenseandbioterrorism.html>
- VJ, D. (1966, April 4). De Mussis and the great plague of 1348. A forgotten episode of bacteriological warfare. *JAMA*.
<https://pubmed.ncbi.nlm.nih.gov/5952188/>.