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## Invisible Warfare: The Psychological Impact of Biological Weapons in the Context of International Humanitarian Law

Ishwah Abbas Khawaja<sup>1</sup>

<sup>1</sup> LLM Scholar, The Islamia University of Bahawalpur, Pakistan. E-Mail: [ishwah.khawaja@gmail.com](mailto:ishwah.khawaja@gmail.com)

### ABSTRACT

This study investigates the historical and modern use of biological weapons as effective psychological warfare tools, delving into the motivations for their use as well as the catastrophic psychological effects they cause. The paper also examines examples such as Japan's use of biological weapons during World War II and the 2001 Anthrax attacks in the United States to highlight the profound psychological consequences of using biological agents in warfare. Despite their classification as weapons of mass destruction, compliance with International Humanitarian Law remains a major concern. Further, the author emphasizes humans' inherent psychological vulnerability to biological weapons threats, revealing how the fear of invisible, contagious, and potentially lethal agents can cause widespread anxiety, paranoia, and social disruption. The study uses the recent COVID-19 pandemic as a case study to highlight the effect that such threats have on an adversary's resolve and morale. It also looks into the past use of fear-mongering to win over the public to unwarranted military actions, like the "shock and awe" attack on Iraq. In summary, the paper advocates for global collaboration and awareness to prevent biological weapons from being used in psychological warfare. It calls attention to the grave dangers such acts pose to global peace and security, as well as their profound and potentially irreversible psychological effects.



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**Corresponding Author's Email:** [ishwah.khawaja@gmail.com](mailto:ishwah.khawaja@gmail.com)

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## **1. Introduction**

International Humanitarian Law, known as the law of armed conflict, is a vital aspect of international law governing how armed conflicts are conducted. Its primary goal is protecting the individuals not involved or no longer involved in hostilities (Solis, 2021). This body of law sets forth guidelines and principles aimed at reducing the impact of armed conflicts and shielding the most vulnerable, including civilians, prisoners of war, and the injured. Yet, implementing international humanitarian law in real-life situations is intricate and unclear (Bouchet-Saulnier, 2013). It entails navigating complex factors, like weighing military needs against protecting civilian lives and property.

Peace is the womb of war where the war slumbers. Peace and tranquility are where the seeds of conflict are sown, often unnoticed and underestimated. When we think of war, we often imagine the destruction, suffering, and loss. We think of guided missiles and fighter jets in the air, guns and well-equipped soldiers on the land, deadly submarines in the sea, and spy satellites in space. The most effective, most dangerous, and the most secretive weapons are those that we cannot see. With the evolving nature of the human mind and the advanced nature of the globe, the idea of war has evolved.

Biological weapons can unleash devastating and indiscriminate death and disease. These weapons have long been recognized as weapons of mass destruction. However, their potential extends beyond physical harm to encompass a potent psychological dimension, making them formidable tools of psychological warfare. By exploiting the inherent fear of invisible and deadly pathogens, biological weapons can sow widespread terror, demoralize enemy combatants, and disrupt civilian life. Due to the volatile nature of biological weapons, when used as a means of warfare can cause damage and injuries without any distinction between civilians and combatants (White, 2002). The psychological effects of biological weapons can be profound and long-lasting. Panic and anxiety can grip populations, leading to irrational behavior and a breakdown of social order. The fear of infection can foster distrust and suspicion, eroding trust in institutions and authorities.

The utilization of biological weapons as a tool for psychological warfare has historical precedent, notably during World War II when the Imperial Japanese Army's Unit 731 engaged in gruesome experiments on human subjects (Vanderbrook, 2013). In the pursuit of developing and testing biological weapons, the unit strategically harnessed fear as a weapon of war, leaving a lasting legacy of trauma and suffering that still impacts survivors and their families. Unit 731 served as the clandestine administrative center for the Imperial Japanese Army's top-secret biological warfare project. Situated in rural Manchuria, a puppet state of Japan at the time, and operating under the codename "the Epidemic Prevention and Water Purification Department," its primary objective was to instigate epidemics and contaminate water sources for the enemy (Hammond, 2018). Faced with the challenge of fighting multiple wars, the Imperial Japanese Army resorted to biological warfare as a means to secure victory on all fronts.

## **1. Research Questions**

In light of the pressing concerns surrounding biological weapons as a means to psychological warfare under the heading of International Humanitarian Law (IHL), understanding the complex interplay between biological weapons, psychological warfare and International Humanitarian Law (IHL) requires a nuanced exploration. This study delves into the multifaceted dimensions of using fear-inducing tactics through biological weaponry within the framework of International Humanitarian Law (IHL). The following research questions will be the focal points of this study:

1. What is fear and how does it serve as a weapon in Biological warfare?

2. How COVID-19 pandemic serve as a wake-up call regarding the dangers and implications of biological warfare?
3. How biological weapons are incompatible with the cardinal principles of International Humanitarian Law (IHL) and how International Humanitarian Law (IHL) addresses this concern?

Some sub-questions will be answered to answer the main research question:

1. Why do we need laws of armed conflict?
2. How does fear serve as a means to sell war?
3. How does International Humanitarian Law (IHL) address the use or threat of biological weapons in armed conflict concerning the psychological impact on civilians, combatants, and affected populations?

### **3. Understanding Laws of Armed Conflict (LOAC)**

Laws cannot dissuade those who disregard them, as no criminal code can encompass every potential violator. Civilian criminality persists despite municipal or federal regulations. Similarly, the Law of Armed Conflict (LOAC) faces challenges, with Geoffrey Best noting that international law is often on the verge of becoming obsolete, especially in the context of the law of war. However, this observation should not serve as an excuse to capitulate to criminal behavior.

Battlefield violations persist throughout history, continue in the present, and are anticipated in the future. Despite training and discipline, supplying young soldiers with guns by nations inevitably leads to war crimes. Acknowledging this reality is not cynicism but an acceptance of the harsh truths of warfare. Despite inevitable transgressions, establishing and adhering to rules in combat, as outlined in international humanitarian laws, serves to mitigate the impact on civilians, minimize suffering, and create accountability for perpetrators. As argued by McMahan (2004), “While eradicating war crimes may be unattainable, rules in warfare provide a necessary moral and legal framework, emphasizing limits on conduct even amid the chaos of battle.” This contributes to broader efforts to humanize conflicts and reduce the devastation caused by armed confrontations.

Compliance with the laws of armed conflict (LOAC) is imperative, driven by the need to avoid mirroring the actions of those we oppose and to maintain credibility in our assertion of fighting for justice. Military professionals seek adherence to the law to constrain the brutality of warfare, ensuring a level of safety and decency among adversaries (Solis, 2021). The principle of reciprocity underscores our commitment to LOAC, recognizing that mistreatment today may result in retaliation against us in the future. Adherence to the law of war is both a legal obligation and an honorable stance for a nation that positions itself as a defender of oppressed populations. Ultimately, obedience to the law of war is guided by a sense of moral duty, where principles supersede expediency.

#### 4. **What is fear and how it functions as a weapon?**

##### 4.1. **Fear in context**

In human psychology, in more precise and clear words human emotions are complex and multifaceted. Emotions can influence the thoughts, behaviors, and physical well-being of a person. They play a vital role not only in our daily lives but also in our communal ways. Six basic emotions are universally recognized across the culture: happiness, sadness, anger, fear, surprise, and disgust. Human emotions are a complex and powerful force that plays a vital role in shaping a society. Human emotions are a complex and powerful force that plays a vital role in shaping a society. As highlighted by Borum (2004), “the strong and unavoidable nature of human emotion when used to manipulate the community’s beliefs, behavior and ideology becomes no less dangerous than any weapon of mass destruction.”

When we think of war our minds often imagine the destruction, suffering, and loss. We think of guided missiles and fighter jets in the air, guns and well-equipped soldiers on the land, deadly submarines in the sea, and spy satellites in space. The most effective, most dangerous, and the most secretive weapons are those that we cannot see. Fear is one of them.

Fear is a complex emotion that is often described as a response to a perceived danger or threat. Fear is a normal and adaptive response to an ‘existing’ danger or ‘may exist’ danger. When fear becomes a familiar experience and expectation, then the symbolic environment is ripe for the politics of fear. When it comes to fear, it does not just happen. It is the point of fear of politics where the citizen’s beliefs are often constructed and then manipulated by those who seek to benefit. When it comes to the politics of fear, fear under this term is socially constructed and managed by the political actors to promote their own goals. The politics of fear promotes fear through propaganda and symbolic manipulation (Altheide, 2006).

##### 4.2. **Fear as Weapon**

With the evolving and continually developing nature of the world the means and methods of the wars are also evolving. When we think of weapons our minds generally imagine guns, missiles, drones, and other weapons of mass destruction (Heverin, 2014). The secretive and unseen weapons, like a hidden enemy, can cause unimaginable destruction. Fear when used as a weapon can not develop a submissive mindset in the community but if prolonged, it is where ideology comes to play a large role in the manipulation of fear.

##### 4.3. **Politics of Fear**

Political leaders utilize fear as a tool for exerting social control over citizens, and the mass media stands out as the primary source shaping information and influencing social control, effectively integrating fear into our lives, language, and perspectives (Altheide, 2006). The politics of fear are predominantly driven by propaganda, where historical instances reveal the unjustified exercise of power justified and labeled as ‘war.’ Notably, the Project for a New American Century (PNAC), the Iraq propaganda campaign, and a compliant news media collaborated to formulate, promote, execute, and rationalize a war with Iraq. As highlighted by Altheide (2006), “this conflict has resulted in over 10,000 American soldiers dead or wounded, alongside numerous contract workers and an estimated 100,000 Iraqi civilians, in addition to 10,000 Iraqi soldiers defending their country.” This illustrates the amalgamation of propaganda and fear in the marketing of a war.

#### **4.4. Post-war fear**

The aftermath of surviving wars often leaves a haunting imprint on individuals, fracturing their mental stability for years, if not a lifetime. Memories of loss, fear, and the brutality of war linger, casting a shadow over everyday existence. For many survivors, the scars are invisible but indelible, manifesting as post-traumatic stress disorder (PTSD), anxiety, depression, and a persistent sense of disconnection from the world they once knew.

A child survivor of the Holocaust who had been at Theresienstadt continually had flashbacks of, it and didn't know where they came from; she thought she was going crazy. Until one day, in a group survivor meeting, a man says, "Yes, at Theresienstadt you could see the trains through the bars of the children's barracks." She was relieved to discover she was not mad (Kinsler, 1990). In the realm of psychology, the trauma and subsequent development of post-traumatic stress disorder (PTSD) among war survivors often manifest as a symptom deeply rooted in their history. Specifically, this history tends to materialize as an insidious fear that seizes the space within their memories, rendering the past uncertain and unsettling. This fear becomes an unwelcome companion, occupying the mental landscape and casting doubt on the stability and clarity of their recollections.

### **5. Covid 19 a Wake-up Call**

The coronavirus disease (COVID-19) emerged from a virus initially named 2019 novel coronavirus (2019-nCoV), later referred to as SARS-CoV-2 due to its genetic resemblance to the SARS virus (Fani, Teimoori & Ghafari, 2020). Genetic sequence analysis indicates a close relationship between 2019-nCoV, SARS-CoV, and MERS-CoV, all belonging to the betacoronavirus group and originating from bats. Many aspects remain unclear, including the precise origin of the virus, its human-to-human transmission mechanisms, the duration of infective virus particle release from infected individuals, and whether the virus undergoes mutations that affect its adaptability to the host. Beyond its toll on health, COVID-19 exposed societal vulnerabilities, exacerbating inequalities, disrupting economies, and testing the resilience of global infrastructures. This pandemic has served as a profound wake-up call regarding the potential consequences of biological warfare, highlighting the world's vulnerability to biological threats and the alarming unpreparedness to combat them effectively (Fani, Teimoori & Ghafari, 2020). It revealed how easily a virus could transcend borders, disrupting economies, overwhelming healthcare infrastructures, and causing widespread suffering. The unpreparedness of the world towards the biological agent to be used as a means of biological warfare holds, in itself, a war strategy.

### **6. The vulnerability of nations; a shared concern**

The threat of a biological agent attack exposes a stark reality: the vulnerability of nations, irrespective of their first or second-world status, is a shared concern. This sudden and ominous prospect compelled nations across the globe to confront the unthinkable, leading to a spectrum of responses ranging from logical, evidence-based considerations to contemplation of scenarios bordering on the realm of science fiction. Instead of confronting the unthinkable and taking responsibility, the world's leaders were busy labeling the virus as 'whatsoever' but a threat. "I beat this crazy, horrible China virus," Trump said in a telephone interview on Fox News Channel's "Sunday Morning Futures" show (Bredemeier, 2020).

### **7. Navigating Misinformation; Implications for Future Biological Threats**

Not just the virus but the vaccination period of covid 19 in itself is a wake-up call regarding the distrust of people around the world in the healthcare system. The myths that followed the Covid 19 vaccine highlight the element of fear in the population related to the outbreak of another virus and eye-witnessing the disasters arising out of the virus. Some called the COVID-19 vaccine as the COVID-19 vaccine alters

the DNA, getting the vaccination can make a person infertile, and where the microchip vaccination conspiracy theory came from (Sriskandarajah, 2021) is still a question. The myths surrounding the COVID-19 vaccine, while intriguing on their own, take on a much more significant context when considering the potential deployment of biological agents in warfare. The skepticism, misinformation, and conspiracy theories that surrounded the vaccine rollout highlighted the immense challenge of disseminating accurate information during a health crisis. If similar dynamics were to occur in the event of a deliberate biological attack, the consequences could be catastrophic. The prevalence of misinformation might hinder efforts to respond effectively, exacerbate public panic, and impede the swift implementation of crucial measures. Therefore, understanding and countering misinformation surrounding vaccines becomes pivotal in preparing for potential biological threats, ensuring a more informed and coordinated response in the face of deliberate biological warfare.

### **8. Exploring New Frontiers in Warfare through the Lens of International Humanitarian Law (IHL)**

International Humanitarian Law (IHL) constitutes a binding global legal framework designed to safeguard individuals who are either not participating in hostilities or have ceased to do so, by imposing limitations on the methods and means of warfare (Bakhsh et al., 2023). Its primary objective is to curtail and prevent human suffering during armed conflicts. Essentially, International Humanitarian Law seeks to impart a “humanizing” influence on unavoidable armed conflicts. The dynamic global landscape is transforming the dynamics of interstate relations, economic activities, societal structures, and even the strategies employed in warfare. Despite these shifts, the history of biological warfare remains inadequately documented, primarily due to its unpredictable and devastating effects on human beings. Furthermore, illnesses purportedly induced by biological weapons frequently mirror naturally occurring diseases, making it challenging to attribute them to a specific Aggressor State. Consequently, this category of weapons has a more limited history of global condemnation (Fernández Sánchez & Domínguez Matés, 2022).

The introduction of biological agents as a “new weapon” in contemporary warfare has generated notable apprehensions regarding their implications within the context of International Humanitarian Law (IHL). Addressing the concerns arising from the present scenario hinges on two fundamental concepts within the realm of International Humanitarian Law (IHL). Initially, the changing landscape of military operations has given rise to novel interpretations of 'warfare.' The utilization of biological weapons blurs the distinction between armed conflict and non-war situations, posing a challenge in defining an 'armed conflict' under International Humanitarian Law (IHL) within the context of these 'new wars' that exist in the ambiguous space between armed conflict and non-war scenarios. Secondly, advancements in science enable the improvement of existing biological weapons and the creation of new ones, increasing their frequency and spread (Turns, 2006).

The significant surge in biological warfare, akin to chemical warfare, owing to technological advancements, occurred notably during the World Wars. Consequently, various nations, including the United States, Canada, and the United Kingdom, initiated the development of their biological warfare programs. Even countries at the forefront of biological weapons research, such as Japan during the conflict with China, seized the opportunity to assess the efficacy of these weapons on the battlefield. Between late 1939 and 1942, Unit 731 conducted multiple biological weapon attacks targeting both enemy military forces and civilian populations in Manchuria and China (Fernández Sánchez & Domínguez Matés, 2022).

Unit 731 used human test subjects who were often individuals deemed as criminals, political prisoners, Communists, or civilians—frequently pregnant women, children, and the elderly. These individuals were

unjustly rounded up under fabricated charges for the purpose of experiments. The majority, accounting for seventy percent of the victims, were Chinese, with others being Korean, Mongolian, Russian, and possibly a few Allied prisoners of war (Leitenberg, 2001). As discussed by Hammond (2018), “Unit 731’s other experiments included injecting prisoners with animal blood and horse urine, heating them until they died, spinning them with centrifuges until they died, and locking them in pressure chambers until their eyes popped out. It’s estimated that about 3,000 people died from the tortures they underwent at Unit 731.” Concerns regarding restrictions on experimenting with and developing biological agents, as well as their potential utilization as weapons, must be adequately tackled within the legal framework of International Humanitarian Law (IHL).

### **9. Cardinal principles of International Humanitarian law in the context of biological weapons**

The International Court of Justice, in its Advisory Opinion on nuclear weapons, acknowledged specific "cardinal principles" of humanitarian law as customary, notably the principles of distinction and the prohibition of using weapons incapable of differentiating between civilian and military targets. These principles also include the prohibition of causing unnecessary suffering to combatants and using weapons that either cause such suffering or needlessly exacerbate it (Solis, 2021). These principles are also codified in Additional Protocol I.

The use of biological agents as weapons starkly violates the 'cardinal principles' of International Humanitarian Law (IHL). The distinctive nature of biological weapons extends to the varied means and mediums through which they can be weaponized. Additionally, in the realm of biological weapons, discerning a clear boundary between research and development is challenging; a nation can develop warfare agents within research facilities. Once created, these agents can be swiftly manufactured in substantial quantities.

In the light of Biological weapons, the two cardinal principles of International Humanitarian law (IHL) are;

#### **10. The Principle of Distinction**

Distinction, also known as discrimination, stands as a crucial battlefield concept that every combatant must adhere to. This principle is among the fundamental tenets of international humanitarian law, tracing its roots back to the “St. Petersburg Declaration of 1868,” to minimize civilian casualties during armed conflicts. Currently, this principle finds codification in articles 48, 51(2), and 52(2) of the 1977 Additional Protocol I to the Geneva Convention, with its prominence highlighted in article 48. The article states that parties to the conflict “shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives”, to “ensure respect for and protection of the civilian population and civilian objects”. This principle also implies that indiscriminate attacks and the use of indiscriminate means and methods of warfare are prohibited. Biological weapons, by their very nature, cannot comply with the principle of distinction. They are inherently indiscriminate, meaning that they cannot be directed with precision to hit only military targets. Instead, they spread uncontrollably, causing harm to both combatants and civilians alike. This indiscriminate nature of biological weapons makes them a clear violation of the IHL principle of distinction (Schmitt, 1999). When addressing the use of indiscriminate weapons in warfare, the principle of distinction is often applied to how specific weapons are deployed rather than the weapons themselves. The Second World War underscored the imperative of enhancing protection for civilian populations during armed conflicts. The “Fourth Geneva Convention of 1949” marked a significant step forward in this regard but primarily focused on the safeguarding of populations under the control of an enemy Power. However, this Convention still inadequately addresses

the comprehensive protection of civilians against the repercussions of hostilities. Recognizing this gap, the International Committee of the Red Cross (ICRC) took action, producing a set of “Draft Rules for the Limitation of the Dangers Incurred by the Civilian Population in Time of War” as early as September 1956 (Rabkin, 2014). These rules featured a section on weapons titled “Weapons with Uncontrollable Effects,” suggesting the prohibition of weapons whose harmful effects might elude the control of those employing them, including delayed-action weapons. Biological weapons are devastating in their potential impact and inherently contradict the principle of distinction which forms the fabric of International Humanitarian Law (IHL). Unlike conventional weapons that can target specific military objectives, biological agents unleash contagion without regard for boundaries, affecting combatants and civilians alike. The inability to control the spread of these weapons undermines the core concept of discrimination in International Humanitarian Law (IHL) poses an unconstrained threat to all individuals regardless of their involvement in conflict, thus starkly violates the principle of distinction.

### **11. Principle of Proportionality**

The principle of proportionality is enshrined in Article 51(5)(b) of the Additional Protocol I to the Geneva Conventions states that “An attack which may be expected to cause incidental loss of life, injury to civilians or damage to civilian objects or a combination thereof, which would be excessive concerning the concrete and direct military advantage anticipated, is prohibited.”

In addition to their indiscriminate nature, biological weapons also pose a significant risk to civilians due to their long-term effects. Once released, biological agents can persist in the environment for extended periods, potentially causing harm to future generations. This long-term threat to human health and safety makes the use of biological weapons incompatible with the International Humanitarian Law (IHL) principle of proportionality, which requires combatants to take all feasible precautions to minimize the suffering of civilians (Zyberi, 2017). In the report submitted to the “Twenty-first International Red Cross Conference”, in 1969, regarding the reaffirmation and development of laws and customs applicable in armed conflicts, the ICRC articulated its primary findings, emphasizing that warring parties should refrain from employing weapons that; are likely to cause unnecessary suffering; which, because of their lack of precision or their effects, affect civilians and combatants without distinction; whose harmful effects were beyond the control of those who used them in time and space.

### **12. Conclusion**

To sum up, this research highlights the critical need for improved international cooperation when dealing with biological hazards. Examining biological weapons in the context of International Humanitarian Law (IHL) as tools of psychological warfare, our study reveals a startling truth: the use of these weapons violates core IHL principles while also taking advantage of the deep psychological weaknesses that exist in human nature.

When historical cases are examined, the profound psychological effects of biological weapons become very evident. The sobering lessons learned from catastrophes like the COVID-19 pandemic are painful reminders of our innate vulnerability to such dangerous dangers. The results emphasize how vital it is to strengthen international legal frameworks and make sure they are properly applied to effectively reduce the use of these weapons.

A global effort must be made in concert to protect against the potentially devastating effects of biological weapons. This entails actively bolstering current international legal frameworks in addition to maintaining them. By working together, we can lessen the likelihood and effects of biological threats, promoting a more secure and safe environment for all.



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