DIALOGUE SOCIAL SCIENCE REVIEW

Lethal Autonomous Weapons System (Laws), A Case Study of Pakistan and India

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Abstract
The purpose of making dangerous weapons by various countries is to increase security and peace. These dangerous weapons are a threat to humanity because these weapons decide by themselves without any human intervention.A small mistake of these dangerous autonomous weapons can lead to the loss of many human lives. On the other hand, these weapons can be very useful in war. Pakistan has also started using AI in its weapons to make advanced weapons. India is also making autonomous weapons to defend its country. Some countries want them to be banned and some countries and organizations believe that they should be used with global rules and regulations.That legal binding with international support will increase and control the risk of lethal autonomous weapons production. Many countries, such as India, the US, UK, China, and Israel, are involved in developing these weapons. The development of lethal weapons would create a competition among states that would create a competition among states that would be a threat for South Asian countries.

Keywords: Autonomous weapons, Military robotics, AI-driven weapons, International law and LAWS, Future of warfare

Introduction
Artificial intelligence (AI) and machine learning (ML) are two close and related fields. Artificial intelligence create machines or system capable of human intelligence to solve problems created by humans. Machine learning is a part of artificial intelligence (AI) that can make systems capable of improving automatically and learning from experience, not by any type of programming. ML solves a number of problems on its own and improves performance with time (Rafiq A. , 2021)
The lethal autonomous weapon system is that any weapon system is capable of

independently selecting targets without any intervention. This autonomous weapon system that selects the target and hits without any human intervention. Once the weapon system was launched by the human operator, it hit the target by using sensors and programming without human intervention. The exact place, time, and target are not known to the user. These systems know the enemy movements and identify their target automatically; these systems exceeded human capabilities. Autonomous weapon systems raise many humanitarian concerns under international law, including the risk to life and property of humans after attack. It was because it was not controlled by the remote and any human; the operator selects the target at the time of launch. This auto system denies human decision-making in different critical situations.(Shrimali, 2021)

New technological developments in autonomy, artificial intelligence, and robots have given both advantages and risks. These advancements enhance armed warfare by having minimum impacts on civilians. But in the weapon system, lack of human control becomes the cause of many consequences. The International Committee of the Red Cross (ICRC) expresses many concerns about autonomous weapon systems due to minimum human control. In these weapons systems, they are lack of control.

- They protected individuals in armed conflicts.
- Many questions raising by human regarding to the international humanitarian law.
- Decisions of life and death of human in the hand of machines.
- Some states agreed on that these weapons are dangerous and these weapons are not decide the life of humans

Lethal Autonomous Weapons System (LAWS) has many advantages over traditional weapons in many perspective, LAWS does not depends on channels of communications, allowing them to operate effectively in the environment. The can functions under the challenging conditions. LAWS reduced the number of people required to support the military operations. They increase the speed of decision-making and response. LAWS have the ability to operate in environments where human soldiers cannot easily function. They directly remove humans from the critical situation. LAWS replace the human troops and minimize the risk to human life. LAWS also minimize the negative outcomes associated with human emotions, such as fear and revenge. LAWS reduced the emotionally charged decisions.

But there are many risks to use the lethal autonomous weapons system. LAWS can change how human manage critical situations in the armed conflicts. People do not know the objective of the attack and not gives any explanation regarding these weapons, why LAWS selects this target? There are many legal, moral, humanitarian, and security concerns related to lethal autonomous weapon systems. LAWS do not know the importance of human life and not have right to kill the human from moral and ethical prospective. The physical and emotional distance between the engineer programmer and the target is a problem; for example, the result is also obtained from the target individual's autonomous weapon system attack on the number of humans. LAWS are unable to perform exact work in the critical situation. If we see the LAWS in the security points they are very dangerous it was because these are in developing phase and not completed yet. As a result, the integration of LAWS into military operations raises critical questions about the future of warfare.

The use of Artificial Intelligence growing day by day in into weapons system, create many risks as described in ISSR analysis. This advancement in autonomous weapons creates many complex security challenges for nations. The development and production of lethal autonomous weapons (LAWS) raises different questions such as legal, ethical, and accountability. Countries such as China, United States, Israel, North Korea, Russia, and United Kingdom are advancing their autonomous weapons program. In South Asia India actively investing in the development of lethal autonomous weapons and these are danger for the regions stability.(Rafiq A. , 2021)

In response to many concerns about LAWS many international organization including United Nations working on framework of development and use of lethal autonomous weapons system, and establishing guidelines to prevent misuse of LAWS.Efforts to create a treaty and binding agreement between global nations in response to emerging challenge. LAWS should be used on civilian in law enforcement and counter terrorisms operations. So organization working on public safety because dual use nature of LAWS.

The international community is divided on the issue of LAWS; some countries want to ban the autonomous weapons, but on the other hand, some countries support their development under the strict regulatory framework. The United Nations arranges multiple discussions on LAWS and needs international cooperation. The Convention on Certain Conventional Weapons (CCW) result of these debates. The high development budget of LAWS impacts the defense budget and economic structure. Public opinion on autonomous weapon systems is mixed; some consider LAWS necessary for modern military capabilities, and some have a number of safety concerns. There is a chance of cyberattacks on the LAWS that compromise their functionality. Effective use of LAWS is possible by training and education for operators. In the modern world, LAWS is in need of military, but on the other hand, the major risk is that if any terrorist organization gets LAWS, they can misuse them.

LAWS were taken up an issue by the international arms control community in the framework of the UNCCW in 2014. The UNCCW debates highlights following challenges.

- ➢ States are not agreed on the definition of lethal autonomous weapons system (LAWS), states believed that autonomous weapons are already exists.
- ➢ The misuse of this autonomous technology by non state actor such as terrorist organizations. The international community needs to address this issue.
- ➢ States not share the information regarding to developing LAWS.

Research Questions
1. How lethal autonomous weapon system (LAWS) changed the military dynamics in the world?
2. What would be the opportunities and challenges for Pakistan and India to become the member of LAWS?

Statement of Problem
Lethal autonomous Weapons (LAWS), which have advanced robotic technology and autonomous drones, have reshaped the dynamic of arms race. Developed

Countries, including the United States, are at the front of in developing these autonomous Weapons. These advancement in danger weapons critical milestone in military technology but also have many risks to humanity. This research significant for developing countries such as Pakistan and India to avail this technology and its impacts on the South Asia region.

Objective of Research
To achieve the objectives, this study is divided into key phases. The first phase explains the development of lethal autonomous weapons system by various and countries and its impacts on the human beings. In the second phase describe the role of Pakistan in the lethal autonomous weapons and its impacts on the South Asia.

Research Methodology
The methodology adopted for this research is qualitative and data will be collected through secondary sources of data. The researcher will get thorough understanding from the relevant documented sources including books, articles, and government publications.

Hypothesis
Artificial Intelligence changed the Military dynamics of the world. The permanent member of Security Council, United State, China, Russia, France, and United Kingdom has developing autonomous weapons . It is a threat for developing countries like Pakistan. United Nations should be opposes this autonomous technology to protect the humans.

Literature Review
Arvind Gupta says a conference of certain conventional weapons held their first meeting with the group of government's experts in November 2017 under Indian leadership in which they looked into the aspects of the lethal autonomous weapons system and its concern with moral values as it is taking the decision of human life and death. Some of the countries are considering it beneficial for military purposes. They feel that this will reduce harm to soldiers. India needs to take immediate action in emerging fields like AI and also conduct studies on currently hot topics like lethal weapons. (Gupta, 2024)

Isha Noor explains in his article that the basic purpose of developing the lethal autonomous weapon system was to promote peace in the region; it can independently target without any intervention. It is usually divided into two categories, one that requires humans for its function and the other is the autonomous weapon system (AWS), which can target independently. Many automatically banned weapons through the Ottawa Treaty of 1997, but those fated weapons are still used for land mines. Pakistan has a clear stance and argues that LAWS are totally unethical, and these are against international humanitarian law. Pakistan was also the first contry to address the issue and ban autonomous weapons. On the other hand, India supports autonomous weapons and argues that they need autonomous weapons due to security concerns in South Asia. In international relations, states only focus on their interests rather than human life.(Noor, 2023)

Michael C. Horowitz explains the comprehensive analysis of the implications of a

lethal autonomous weapon system for international security and military strategy. This book explains how technological advancement changes the dynamic of warfare, particularly in India and Pakistan. LAWS reduced military risks. The author also explains how the introduction of LAWS impacts the defense system and border stability of Pakistan and India in South Asia. (Horowitz, 2021)

Nehal Bhuta's book explores the legal and ethical dimensions of autonomous weapons systems, focusing on their compliance with international humanitarian law. The author explains how legal enforcement works under LAWS. The need for new legal norms and guidelines for the use of lethal autonomous weapon systems. The main focus of the author is that autonomous weapons are needed in a new world with strict rules and a proper framework.(Bhuta, 2016)

In this book, the writer argues that no matter how advanced the technology, it should not hold the power of human life and death. What if an autonomous weapon commits crime? Which can cause humanitarian loss. There is also a risk of its misuse by enemies. LAWS remove soldiers's direct access to its use, which can make it easier for countries involved in a conflict without human life loss. The writer and his organization for human rights advocate for a ban on killer weapons.(Docherty, 2012)

Global Context and Ethical Concerns

The international community divided on LAWS. Some argue that these system can enhance the military reduce humans in wars and provided many tactical advantages. Some raise concern on LAWS because lack of accountability and human life and death decision. AI arms race and LAWS violate the international humanitarian law. LAWS also known as "Killer Robots" are weapon system that can select the target without any human intervention. The systems are made by use of artificial intelligence (AI) and machine learning (ML)which operate independently in war.

LAWS change the military warfare by enhancing decision making capability and reduce human intervention in the environment which too dangerous. Developed nations like United States, Russia, China, and United Kingdom invested in the research and developing these technologies. The LAWS shift the balance of power, arms race among technologically advanced countries and raising concern about security and stability. The LAWS are broader field of AI and robotics. This autonomous system rely on algorithms, sensor technology, and data processing to perform different autonomous tasks. LAWS increased the efficiency and reduced the human errors but some challenges are rise like reliability, security and ethical use of these autonomous weapons. The development of these autonomous weapons raises different ethical questions that challenges existing norms and framework in international law and human rights. In traditional warfare, humans are responsible for their action, and there are legal frameworks to address war crimes and violation of international humanitarian law. In the lethal autonomous weapons system it becomes unclear who is responsible for the decisions made by an autonomous system. Is it the programmer, the manufacturer, the military or state? The moral implications of allow machine to make the decisions of human life and death. Many people argue that give the decisions to kill to an autonomous system undermine the value of human life. There is fear that the use of lethal autonomous weapons could make the war easy

for humans and making easier to resort to violence and conflict. The LAWS operate without human sense of judgement, empathy, ethical considerations. Implications of lethal autonomous weapons systems within the South Asian security context, focusing on India and Pakistan. Iqbal argues that the rapid advancements in autonomous technologies present both strategic opportunities and significant risks for these countries, which have a history of military rivalry and nuclear tensions. (Iqbal, 2020)

Strategic Importance of LAWS in South Asia

Lethal Autonomous Weapon Systems (LAWS) has significant strategic importance in South Asia, particularly for Pakistan and India to enhance deterrence and military capabilities, and address counterterrorism. These technologies also rises different risks including increase in arms race and need for legal framework. Both countries ensure that the deployment of LAWS contributes to regional stability and security.

Pakistan

LAWS can provide effective means of Pakistan's defense capabilities, especially given its limited defense budget compared to India. The development in LAWS allowing Pakistan to defend its borders more effectively. LAWS can be used to targets different terrorist groups and organizations within the borders with precision. Autonomous systems offer continuous surveillance, improving awareness and response times in counterterrorism operations. For Pakistan the development of Lethal Autonomous Weapons System (LAWS) can play an important role in enhancing defense and deterrence. The long rivalry with India, Pakistan views LAWS to counterbalance India. Pakistan has resources advantages in comparison to India's larger defense budget and advanced technology. The integration of autonomous system into Pakistan's military serve as a deterrent against India's aggression. These technologies could be used to protect Pakistan's infrastructure such as military bases, communication hubs, and nuclear facilities with minimal human involvement. Pakistan faces many challenges from terrorism and insurgency within borders, particularly along with Afghanistan and in region like Baluchistan, Khyber Pakhtunkhwa. LAWS provide a powerful tool in counterterrorism operations, and Pakistan's military to conduct strikes with precision. Autonomous system with advanced sensors and artificial intelligence (AI) could track terrorist cells, even in difficult, without risking the lives of soldiers. Pakistan could leverage LAWS in warfare against India. The conflict in Kashmir and the threat of conventional warfare with the use of autonomous system that advantages in both defensive and offensive operations. LAWS could make Pakistan to challenge India's military by using small amount of resources but achieving effective results through precision targeting.LAWS offer many advantages for Pakistan but on other hand many risks. The introduction of autonomous weapon system into the region become cause of increase in the arms race. As India may seek to counterbalance Pakistan's advancements with its own development of similar technologies. This increase tensions between both countries and undermine regional stability.(Bibi, 2023)

India

As part of its broader military modernization efforts, India views LAWS as essential to maintaining an edge over Pakistan and other regional

countries.LAWS increase India's ability to project power and deterrence along its borders, particularly in Kashmir. India's developing LAWS capabilities is a part of achieving technological self-reliance and reduce the dependency on foreign military aid. India aims become a hub for technological innovation in defense by investing in LAWS. By this India got both economic and strategic benefits. LAWS can be used in counterinsurgency operations in areas like Kashmir and the northeastern states, providing precise targeting and reducing risk to military. Lethal Autonomous Weapons System (LAWS) can enhance the border security, military surveillance, and response capabilities against terrorist activities.

The India's technological advancement to maintain its edge over Pakistan and China. India's investment in LAWS is a reflection of its technological self-reliance. India developing defense technologies, and autonomous system represent the military innovation. By increasing research and development in AI, robotics and advanced sensors. India's aims to reduce its dependency on foreign military aid such as Russia and Israel and establish itself as a leader of autonomous weapons and robotics technology. As a nuclear power conventional force of India are already formidable but the addition of LAWS provides a further layer of defense, and India's deterrence capability. The ability to deploy autonomous systems for reconnaissance, strike missions, and surveillance. The use of LAWS would improve India's force projection capabilities. India seeks to be a regional power with the ability to development of autonomous weapons. By integrating autonomous system into military, India can got technological superiority. Its capacity to manage different security challenges including border, counterinsurgency operations, and maintain security in India Ocean.(Baig & Maryyum, Potential Impact of Lethal Autonomous Weapons Systems on Strategic Stability and Nuclear Deterrence in South Asia, 2023)

India facing different challenges in managing insurgency and terrorism particularly in Kashmir and in the northeastern states. The India develop long range autonomous weapons to counter insurgent activities. Autonomous weapons deployed to monitor and difficult terrains, providing real-time intelligence and facilitating precision strikes against insurgents without risking the lives of soldiers.

India is continuously trying to take high positions in the emerging of military technologies through a group of experts. On one hand, India is supporting laws and regulations for lethal autonomous weapons; on the other hand, they are developing their weapons of mass destruction. In 2023, UN Secretary Antonio Guterres recommended that they establish legally binding instruments by 2026. Through these instruments, LAWS and other autonomous weapons would be prohibited. The writer argues that Indian wish to get more power and influence through establishing lethal autonomous weapons can be a threat to regional security and stability. (Baig, 2024)

Impact on Regional Stability and Security Dynamics
The proliferation of lethal autonomous weapons (LAWS) has many implications for regional stability and security Dynamics. These autonomous weapons operate independently without any human intervention, have significant debate regarding their impacts on global peace and security. The deployment of LAWS change the existing strategic equilibrium in various regions. Many countries possessing advanced autonomous weapons gain a military advantages,

promoting arms race as other countries also developing autonomous weapons. The introduction of LAWS can increase arm race, especially among rival states. As countries invest heavily in developing their own autonomous systems, increased military expenditures. These weapons reduce the need for human soldiers by this increase the scale of conflict. The use of LAWs raises ethical and legal challenges. The autonomous weapons make the decisions of human death and life, it against the moral values and international humanitarian laws, stop the efforts to maintain the stability in the region. LAWS could be used by non-states actor like terrorist organizations and insurgent groups. The accessibility of lethal autonomous technologies enable these actors to conduct more lethal attacks, destabilizing regions and challenging state security.

Technological developments and the use of IA have heated debates on global security as it has become the part of people's lives. India should add norms of using and production of these weapons to their policy. Secondly, as these technologies are developed, it is difficult to identify which is for military purposes and which is for humanitarian betterment. The US Navy has been using phalanx close-in in their marine security, which can sense anti-ship missiles. Pakistan is interested in autonomous weapons to fill the gap with enemy country India through taking technologies to compete with its rivals in the region.(Mohantyt, 2016)

Legal and Regulatory Challenges

Lethal autonomous weapons (LAWS) significant legal and regulatory challenges including international humanitarian law, ethics, accountability, and technological reliability. One of the primary legal challenges of LAWS is with international humanitarian law. There is difference between military targets and civilians, a task that may be beyond the current capabilities of autonomous systems. The development of LAWS raises different questions about accountability when things gone wrong by these autonomous weapons. If an autonomous weapon unlawfully kills civilians or commits a war crime, determining who is responsible? The manufacturer, programmer, military commander, or the state which develop comes complex.LAWS are totally unethical, the decision to take a human life is made by human, but LAWS would shift the decision making process to these autonomous weapons. By this reduce the value of human life it was because machine does not know the importance of human life. These weapons rely on theprograming and sensor systems, which can be prone to errors and biases. For instance, machine learning programing can inadvertently perpetuate or even exacerbate existing biases, leading to wrong targeting.

The proliferation of LAWs to non-state actors, including terrorist groups, is a significant challenge. These technologies do not fall into the wrong hands requires stringent controls and international cooperation. This involves not only regulating the export and sale of LAWs but also implementing measures to prevent their illegal transfer and use of these autonomous weapons.(Mathur, 2021)

Conclusion

Humanity is moving into future where machines and robot will play an unpredictable role in every prospect of life. Emerging technologies empower

individuals to shape their desires outcomes. As we move forward, it is difficult to address issues such as autonomy, responsibility, security, privacy, and identity. The introduction of LAWS could transform the nature of warfare. By minimizing human intervention, these systems lower the risk for initiating conflicts. This also raises the risk of proliferation, making these technologies accessible to non state actor, destabilizing global security. LAWS are threat for international humanitarian law by complicating accountability. Nations must commit to prevent these lethal autonomous weapons.

Pakistan and India as neighboring rivals countries with a history of many conflicts, approach the issue of Lethal Autonomous Weapons Systems (LAWS) from many perspectives shaped by their strategic, political, and security concerns. Both countries recognize the transformative potential of these technologies in modern warfare but differ in their stance toward their development and deployment.

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