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ADVANCING PROTECTION: ROLE OF ARTIFICIAL INTELLIGENCE IN SAFEGUARDING WOMEN AND CHILDREN UNDER INTERNATIONAL HUMANITARIAN LAW

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Abstract:

In the realm of armed conflict, women and children endure unimaginable suffering, often falling victim to violence, exploitation, facing threats ranging from sexual violence and forced displacement. Despite the existence of international humanitarian law (IHL) designed to shield civilians during wartime, the implementation and enforcement of these protections remain a difficult challenge. International humanitarian law (IHL) seeks to safeguard their rights and well-being during times of war, yet implementation remains challenging. However, the emergence of artificial intelligence (AI) presents new opportunities to strengthen the safeguarding of women and children in conflict zones. This extensive article explores the transformative potential of AI across various domains, including early warning systems, risk assessment, monitoring, documentation, and accountability mechanisms. Drawing on empirical evidence, case studies, and expert insights, this article delves into the complexities, opportunities, challenges, and ethical considerations associated with the integration of AI in efforts to protect women and children under IHL.

AI plays a multifaceted role in protecting civilians, especially women and children, under international humanitarian law (IHL). From aiding in conflict prevention and early warning systems to facilitating humanitarian assistance and protecting vulnerable populations, AI technologies have the potential to significantly impact the implementation and enforcement of IHL principles. This essay explores various aspects of AI's role in safeguarding civilians within the framework of IHL.

In recent years, the integration of AI into humanitarian efforts has emerged as a promising avenue for bolstering the protection of vulnerable populations under IHL. AI technologies, with their capacity for data analysis, predictive modeling, and automation, offer new opportunities to anticipate, prevent, and respond to threats faced by women and children in conflict-affected contexts. This article provides a comprehensive examination of how AI can be harnessed to enhance the protection of women and children under IHL, delving into various applications, challenges, and ethical considerations.

KEYWORDS: International Humanitarian Law, Artificial Intelligence, Women Protection, Children Protection, Human Rights

Introduction:

In conflict-ridden regions worldwide, women and children often find themselves on the front lines of suffering, enduring the most severe consequences of armed conflict. Despite the existence of legal frameworks such as international humanitarian law (IHL) aimed at safeguarding civilians during war, violations against women and children persist unabated. However, the advent of artificial intelligence (AI) heralds a new era in humanitarian response, offering unprecedented capabilities to anticipate, prevent, and mitigate threats faced by vulnerable populations. This comprehensive article explores the multifaceted role of AI in enhancing the protection of women and children under IHL, examining its applications, challenges, and ethical implications.

International humanitarian law (IHL) serves as a beacon of hope in times of conflict, aiming to mitigate the horrors of war and protect the most vulnerable, including women. Women often face unique challenges during armed conflicts, including sexual violence, displacement, and loss of livelihoods. This article delves into the various provisions of IHL specifically designed to safeguard the rights and dignity of women in conflict zones, highlighting both achievements and ongoing challenges.

In times of armed conflict, children are among the most vulnerable members of society, facing profound risks to their safety, well-being, and future prospects. International humanitarian law (IHL) serves as a crucial framework for protecting children in conflict settings, establishing clear guidelines and principles to minimize the impact of war on their lives. This article explores the multifaceted ways in which IHL safeguards the rights and interests of children during armed conflicts, addressing key provisions, challenges, and ongoing efforts to strengthen child protection in humanitarian contexts.

Women need shield under International Humanitarian Law: -

The roots of IHL can be traced back to ancient civilizations, where codes of conduct sought to regulate the conduct of war. However, it was not until the 19th and 20th centuries, with the adoption of the Geneva Conventions and subsequent treaties that a comprehensive legal framework for the protection of civilians in armed conflicts began to emerge.¹ Over time, the principles of IHL have evolved to address the specific needs and vulnerabilities of women in conflict settings.

At the heart of IHL lies the principle of humanity, which mandates the protection of all civilians, irrespective of gender, from the effects of armed conflict. Additionally, the principles of distinction, proportionality, and necessity govern the conduct of hostilities, emphasizing the need to minimize harm to civilians, including women and girls.²

Addressing Gender-Specific Vulnerabilities:

Armed conflicts exacerbate existing gender inequalities, subjecting women to unique forms of violence and exploitation. From the deliberate targeting of women and girls for sexual violence to the disruption of essential services like healthcare and education, the impacts of conflict on women are profound and far-reaching. International humanitarian law acknowledges these gender-specific vulnerabilities and seeks to provide tailored protections to mitigate the risks faced by women in times of war.

¹ International Committee of the Red Cross – Geneva Conventions and their commentaries (01 Jan, 2014) <https://www.icrc.org/en/war-and-law/treaties-customary-law/geneva-conventions> (last visited on 12th Dec, 2023)

² Françoise Krill, International Committee of the Red Cross, The Protection of Women in International Humanitarian Law 31-12-1985 Article, International Review of the Red Cross, NO. 249, (31st Dec 1985) <https://www.icrc.org/en/doc/resources/documents/article/other/57jmfj.htm> (last visited on 25th December, 2023)

Protection from Sexual Violence:

One of the most egregious violations of women's rights in conflict is sexual violence. IHL prohibits rape, sexual slavery, enforced prostitution, and other forms of sexual violence as grave breaches of the Geneva Conventions. International humanitarian law unequivocally condemns such acts and seeks to hold perpetrators accountable. The Rome Statute of the International Criminal Court recognizes sexual violence as a war crime and a crime against humanity, signaling the international community's commitment to combatting impunity for these heinous crimes. Additionally, resolutions such as UN Security Council Resolution 1325 on Women, Peace, and Security highlight the importance of preventing and addressing gender-based violence in conflict settings.³

Ensuring Access to Humanitarian Assistance:

Access to humanitarian assistance is crucial for the survival and well-being of women affected by armed conflict. International humanitarian law mandates parties to a conflict to allow and facilitate the delivery of humanitarian aid to civilians, including women and girls. This includes access to essential services such as healthcare, reproductive health services, psychosocial support, and protection from violence. Ensuring unhindered access to humanitarian assistance is essential for addressing the specific needs of women and promoting their resilience in the face of conflict-related challenges.

Protection of Maternal Health:

Pregnant women and new mothers are particularly vulnerable in conflict zones, facing challenges in accessing essential healthcare services. IHL requires parties to a conflict to ensure access to medical care for pregnant women and mothers, including prenatal and postnatal care, as part of their obligation to provide adequate healthcare to civilians.⁴

Prevention of Displacement:

Armed conflicts often result in mass displacement, with women and children constituting a significant proportion of displaced populations. IHL prohibits arbitrary displacement and requires parties to a conflict to ensure the safety and well-being of civilians, including women, during

³ Office of the Special Adviser on Gender Issues and Advancement of Women, <https://www.un.org/womenwatch/osagi/wps/> (last visited on 10th January, 2024)

⁴ The Practical Guide to Humanitarian Law, [https://guide-humanitarian-law.org/content/article/3/women/#:~:text=Pregnant%20Women%20and%20Maternity%20Cases&text=Whether%20or%20not%20they%20are.maternity%20cases%E2%80%9D%20\(GCIV%20Art.](https://guide-humanitarian-law.org/content/article/3/women/#:~:text=Pregnant%20Women%20and%20Maternity%20Cases&text=Whether%20or%20not%20they%20are.maternity%20cases%E2%80%9D%20(GCIV%20Art.) (last visited on 10th January, 2024)

displacement. Additionally, the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) emphasizes the right of women to protection and assistance in situations of armed conflict.⁵

Participation in Peace-building:

Women's participation in peace-building and conflict resolution processes is essential for achieving sustainable peace and addressing the root causes of conflict. IHL recognizes the importance of women's involvement in decision-making processes related to peace and security, emphasizing their role as agents of change in building inclusive and resilient societies.

Existing Legal Framework on Women Protection:

At the core of the international legal framework for protecting women in armed conflict are the Geneva Conventions of 1949 and their Additional Protocols. These foundational treaties establish fundamental principles governing the conduct of hostilities and the treatment of civilians, including women. Provisions such as the prohibition of attacks on civilians, the principle of distinction between combatants and non-combatants, and the requirement to provide humane treatment to all persons in the hands of the enemy are essential for safeguarding the rights of women during armed conflicts.

Challenges and Gaps:

Despite the progress made in integrating gender perspectives into IHL, significant challenges and gaps remain. Women continue to face barriers in accessing justice and reparations for violations committed against them during armed conflicts. Moreover, the implementation of IHL provisions related to women's rights often falls short due to inadequate resources, capacity, and political will.

Children safeguard required under International Humanitarian Law: -

In the grim theatre of armed conflict, children are among the most vulnerable and deeply affected victims. Their innocence is often shattered by the horrors of war, exposing them to grave risks of violence, displacement, and deprivation. However, amidst the chaos and devastation,

⁵ United nations Human Rights, Office of the High Commissioner- <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-elimination-all-forms-discrimination-against-women> (last visited on 14th December, 2023)

international humanitarian law (IHL) stands as a beacon of hope, providing essential protections to shield children from harm and uphold their rights.⁶

The dilemma of Children in Conflict:

Armed conflicts have devastating consequences for children, disrupting their lives, tearing apart families, and robbing them of their childhoods. Children are exposed to a myriad of risks, including recruitment as child soldiers, sexual violence, forced displacement, and the deprivation of essential services such as education, healthcare, and nutrition. The scars of conflict often leave lasting physical, psychological, and emotional traumas that hinder children's development and prospects for a better future.

At the core of IHL lies the principle of humanity, which mandates the protection of all civilians, including children, from the effects of armed conflict. Additionally, principles such as distinction, proportionality, and necessity govern the conduct of hostilities, emphasizing the need to minimize harm to children and ensure their special protection.

Protection from Recruitment and Use in Armed Forces:

One of the gravest violations of children's rights in conflict is their recruitment and use as child soldiers. IHL unequivocally prohibits the recruitment and use of children under the age of 18 in armed forces or armed groups, recognizing them as victims deserving of special protection. The Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict reinforces this prohibition and calls for measures to prevent the recruitment and use of child soldiers.

Protection from Violence and Abuse:

Children in conflict zones are particularly vulnerable to various forms of violence and abuse, including sexual violence, trafficking, and exploitation. IHL prohibits such acts and establishes obligations for parties to a conflict to ensure the safety and well-being of children. Moreover, the Convention on the Rights of the Child (CRC) recognizes children's right to protection from all forms of violence, abuse, and exploitation, regardless of their nationality or status.⁷ The Rome

⁶ Denise Plattner, International Committee of the Red Cross, The Protection of Children in International Humanitarian Law, Article, International Review of the Red Cross, NO. 240 (30th June, 1984) <https://www.icrc.org/en/doc/resources/documents/article/other/57jmat.htm> (last visited on 12th December, 2023)

⁷ United Nations Human Rights, Office of the High Commissioner- <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child> (last visited on 12th Dec., 2023)

Statute of the International Criminal Court (ICC) identifies certain acts of sexual violence as war crimes and crimes against humanity, underscoring the international community's commitment to combating impunity for these heinous crimes and providing justice and redress to victims.⁸

Access to Education and Healthcare:

Armed conflicts disrupt essential services, including education and healthcare, depriving children of their right to learn and access medical care. IHL mandates parties to a conflict to facilitate the continued provision of education and healthcare services for children, ensuring their access to quality education, immunization, and medical treatment. Moreover, the CRC emphasizes children's right to education and healthcare, calling for measures to mitigate the impact of armed conflict on their development and well-being.

Ensuring Access to Humanitarian Assistance and Education:

Amidst the chaos and devastation of war, ensuring access to humanitarian assistance is critical for the survival and well-being of children and their families. International humanitarian law mandates parties to a conflict to allow and facilitate the delivery of humanitarian aid to civilians, including children, ensuring access to essential services such as healthcare, nutrition, shelter, and psychosocial support. Additionally, education plays a vital role in protecting children from the risks of recruitment, exploitation, and violence, offering them hopes for a brighter future and the opportunity to rebuild their lives.

Family Reunification and Support:

Armed conflicts often result in the separation of children from their families, exposing them to further risks and vulnerabilities. IHL requires parties to a conflict to take measures to reunite separated children with their families and provide them with appropriate care and support. Additionally, the CRC recognizes the right of every child to know and be cared for by their parents, emphasizing the importance of family reunification and support in protecting children's rights during armed conflicts.

Challenges and Gaps:

The cornerstone of the international legal framework for protecting civilians in armed conflict is

⁸ Rome Statute of the International Criminal Court: https://legal.un.org/icc/statute/99_corr/cstatute.htm (last visited on 10th Dec, 2023)

the Geneva Conventions of 1949⁹ and their Additional Protocols. These treaties establish fundamental principles, such as the prohibition of attacks on civilians and the requirement to distinguish between combatants and non-combatants, which are essential for safeguarding the lives and well-being of children in conflict zones. Additionally, the Convention on the Rights of the Child (CRC) and its Optional Protocol on the involvement of children in armed conflict offer comprehensive protections for children affected by war, prohibiting their recruitment and use as child soldiers and prioritizing their best interests in all decisions affecting them.¹⁰

Despite the progress made in integrating child protection into IHL, significant challenges and gaps persist. Children continue to suffer disproportionately from the effects of armed conflict, facing risks of recruitment, violence, displacement, and deprivation of essential services. Moreover, the implementation of IHL provisions related to child protection often falls short due to inadequate resources, capacity, and political will.

Role of AI Enhance the Protection of Women and Children under International Humanitarian Law:

Early Warning Systems:

Early warning systems serve as a critical tool for identifying and responding to risks faced by civilians in conflict zones, including women and children. One of the fundamental challenges in protecting women and children in conflict zones is the ability to anticipate and prevent violence before it occurs. AI-powered early warning systems offer a proactive approach to identifying and mitigating risks to vulnerable populations. By analyzing diverse data streams, including social media, satellite imagery, and local reports, AI algorithms can discern patterns and indicators of impending violence, such as mass displacement, armed confrontations, or outbreaks of sexual violence. For instance, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) has harnessed AI to scrutinize social media data and forecast humanitarian crises in real-time. By furnishing timely and actionable insights, AI-powered early warning systems empower humanitarian organizations to deploy resources and interventions judiciously, thereby expanding the protection of women and children in conflict-affected regions.¹¹

⁹ Supra p. 3

¹⁰ Supra p. 8

¹¹ United Nations Office for the Coordination of Humanitarian Affairs <https://www.unocha.org/> (last visited on 10th Dec, 2023)

Enhanced Targeting Accuracy:

AI algorithms can improve the precision of targeting in military operations, reducing the risk of civilian casualties and collateral damage. By analyzing real-time data and identifying potential targets with greater accuracy, AI-enabled weapons systems can adhere more closely to the principles of distinction and proportionality under IHL, thereby minimizing harm to civilians.

Addressing Bias and Discrimination:

AI can help prevent and respond to gender-based violence (GBV) by analyzing data patterns to identify high-risk areas and populations, improving the effectiveness of early warning systems and targeted interventions. AI-powered chatbots and mobile applications can provide support and information to survivors of GBV, connect them with relevant services, and facilitate reporting mechanisms, thus enhancing access to justice and support for women and children affected by conflict-related violence.

While AI has the potential to promote gender equality and protect vulnerable populations; it can also perpetuate biases and discrimination if not properly designed and regulated. Therefore, it is essential to develop AI systems that are transparent, accountable, and inclusive, taking into account diverse perspectives and ensuring that they do not reinforce existing inequalities or discriminate against marginalized groups, including women and children.

Capacity Building and Training:

AI can support capacity building and training initiatives aimed at enhancing the knowledge and skills of humanitarian workers, military personnel, and law enforcement officials regarding IHL principles and their application in practice. AI-powered simulations and virtual reality training programs can simulate complex scenarios, enabling practitioners to develop critical decision-making abilities and ethical judgment in situations involving the protection of civilians.¹²

Risk Assessment and Mitigation:

In addition to early warning systems, AI contributes to the systematic assessment and mitigation of risks confronting women and children in conflict zones. By sifting through vast troves of data, encompassing demographic statistics, historical trends, and geospatial information, AI algorithms

¹² Andrea Farres Jimenez, *Embedding Gender in International Humanitarian Law: Is Artificial Intelligence Up to the Task?* (27th Aug, 2021), <https://www.justsecurity.org/77970/embedding-gender-in-international-humanitarian-law-is-artificial-intelligence-up-to-the-task/> (last visited on 12th Dec, 2023)

can pinpoint areas characterized by heightened risks of gender-based violence, child recruitment, or forced displacement. Furthermore, AI facilitates predictive modeling and scenario analysis to anticipate the ramifications of armed conflict on vulnerable populations, thereby informing strategic decision-making by humanitarian actors. For instance, the International Committee of the Red Cross (ICRC) has leveraged AI to analyze satellite imagery and gauge the extent of damage to civilian infrastructure, such as schools and hospitals, thereby prioritizing humanitarian assistance accordingly. By enhancing the situational awareness of humanitarian actors, AI equips them to adopt preemptive measures and mitigate the perils confronting women and children in conflict-affected settings.

Monitoring and Documentation:

AI-driven technologies play a critical role in monitoring and documenting human rights violations, including those perpetrated against women and children. Through the analysis of multimedia content, such as images and videos, AI algorithms can identify and categorize instances of sexual violence, child exploitation, or attacks on civilian infrastructure. Moreover, AI enables the geospatial mapping of incidents to visualize trends and patterns of violence, facilitating evidence-based advocacy and accountability efforts. For instance, the Human Rights Watch (HRW) has employed AI to analyze satellite imagery and corroborate eyewitness accounts of atrocities committed against women and children in conflict zones. By automating the process of evidence collection and analysis, AI strengthens the documentation of human rights violations and ensures that perpetrators are held accountable for their actions.

AI technologies, such as remote sensing and satellite imagery analysis, can monitor compliance with IHL principles by detecting and documenting violations, including attacks on civilians, sexual violence, and recruitment of child soldiers. By providing objective evidence, AI-powered monitoring systems contribute to accountability mechanisms and facilitate the prosecution of war crimes and human rights abuses.

Accountability Mechanisms:

Furthermore, AI contributes to enhancing accountability mechanisms for violations against women and children under IHL. By automating the analysis of large-scale data sets, including court records, witness testimonies, and forensic evidence, AI algorithms can identify patterns of abuse and support legal proceedings against perpetrators. Moreover, AI enables the identification of individuals involved in human rights violations through facial recognition and biometric

matching technologies. For example, the International Criminal Court (ICC) has utilized AI to analyze digital evidence, such as photos and videos, to identify and prosecute perpetrators of sexual violence in conflict zones. By strengthening the accountability of perpetrators, AI promotes deterrence and contributes to the prevention of future violations against women and children in armed conflicts.

Protection and Assistance in Conflict Zones:

AI-powered drones and robotics are increasingly used for delivering humanitarian aid and conducting search and rescue operations in conflict zones. These technologies can access hard-to-reach areas, deliver essential supplies, and provide medical assistance, thereby protecting civilians, especially women and children, who are disproportionately affected by armed conflict.¹³

Legal Challenges and Ethical Considerations:

Despite its transformative potential, the integration of AI into humanitarian efforts to protect women and children under IHL is not without challenges and ethical considerations. Firstly, the reliance on AI algorithms raises concerns about data bias and algorithmic fairness, particularly in contexts marked by cultural, linguistic, and socioeconomic diversity. Biases in data collection and algorithmic decision-making may exacerbate existing inequalities and undermine the effectiveness of AI-driven interventions. Moreover, the deployment of AI for surveillance purposes raises concerns about privacy rights and data protection, especially in conflict-affected areas with weak legal frameworks. Humanitarian organizations must ensure that AI systems are transparently designed, ethically deployed, and accountable to affected populations to mitigate these risks and uphold the principles of dignity, autonomy, and consent.

The increasing reliance on AI in conflict settings raises ethical and legal challenges related to accountability, responsibility, and the attribution of decision-making authority. Concerns have been raised regarding the autonomy of AI-enabled weapons systems, their potential to escalate conflicts, and the lack of human control and accountability in decision-making processes. Therefore, it is essential to establish clear legal frameworks and regulatory mechanisms governing the development, deployment, and use of AI technologies in armed conflict, ensuring compliance with international humanitarian and human rights law.

¹³ Rowena Rodrigues, Legal and Human Right Issues of AI: Gaps, Challenges and Vulnerabilities, Volume 4, (Dec, 2020) <https://www.sciencedirect.com/science/article/pii/S2666659620300056> ((last visited on 22nd Dec, 2023)

Conclusion:

In conclusion, international humanitarian law plays a crucial role in protecting women's rights and dignity in conflict settings. Through its principles and provisions, IHL seeks to mitigate the impact of armed conflict on women, prevent sexual violence, ensure access to essential healthcare services, and promote women's participation in peace building processes. However, ongoing challenges and gaps highlight the need for continued efforts to strengthen the implementation of IHL and address the specific needs and vulnerabilities of women in conflict-affected contexts. By upholding the principles of humanity, distinction, and proportionality, IHL reaffirms the commitment of the international community to safeguard the rights and dignity of women in times of war and conflict.

In conclusion, the protection of women under international humanitarian law is a cornerstone of efforts to uphold human rights and promote peace and security in conflict-affected regions. By recognizing and addressing the gender-specific vulnerabilities faced by women in armed conflicts, IHL plays a crucial role in mitigating the impact of war on women and advancing gender equality on a global scale. As the international community continues to strive for a world free from the scourge of armed conflict, it must reaffirm its commitment to protecting and empowering women as agents of change and resilience in times of crisis.

In conclusion, the protection of children under international humanitarian law is both a legal obligation and a moral imperative. Upholding the rights and dignity of children in times of conflict is essential for building a more just, peaceful, and sustainable world. As the international community continues to grapple with the complexities of armed conflict, it must reaffirm its commitment to protecting children from harm and ensuring their rights and well-being are upheld and respected in all circumstances. Only then can we truly fulfill our collective responsibility to safeguard childhood and nurture the future generations who will inherit the world we leave behind.

The integration of artificial intelligence (AI) into humanitarian efforts holds immense promise in fortifying the protection of women and children under international humanitarian law (IHL). By harnessing AI's capabilities across diverse domains, including early warning systems, risk assessment, monitoring, documentation, and accountability mechanisms, humanitarian actors can markedly enhance their ability to forestall, respond to, and address violations against vulnerable

populations in conflict zones. Nonetheless, the deployment of AI in humanitarian contexts must be underpinned by principles of transparency, accountability, and respect for human rights to ensure that its benefits are realized without compromising fundamental tenets of dignity, autonomy, and justice. Through concerted endeavors among governments, humanitarian organizations, technologists, and local communities, AI can emerge as a potent instrument in the pursuit of peace, security, and justice for women and children in times of conflict. However, to harness the benefits of AI while mitigating its risks and ethical challenges, it is crucial to promote responsible and inclusive AI development, strengthen legal frameworks, and ensure meaningful human oversight and accountability in the use of AI technologies in conflict settings.

