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AI AND MILITARY PRECISION IN DRONES ATTACK ON THE ISRAELI-HAMAS CONFLICT

Abstract: *This paper investigated the nexus between AI and military precision in drone attacks on the Israeli-Hamas conflict to proffer a research-based strategy for regulating the AI-enabled weapon systems, likewise addressing a way forward to peace and conflict resolution. Anchored on a three-stream ambit of the 'Just War' theory, the 'Technological Determinism' theory, and the 'Security Dilemma' theory, efforts were made to integrate these distinct perspectives to analyze the complexity of AI on military operations, including the ethical implications and strategic outcomes for the Israeli-Hamas conflict. Findings revealed that AI is reshaping the landscape of military operations in the Israeli-Hamas conflict, mainly through its application in drone strikes. Regarding military precision, AI technologies enable sophisticated data analyses that facilitate enhanced targeting and surveillance capabilities. However, the integration of AI in drone warfare poses serious challenges in international law and military ethics since the precision of AI-driven strikes does not eliminate the risk of civilian casualties, raising contestation about the moral justifications for their use in densely populated areas, like what happened in Gaza. This paper states that the future of AI and military drone precision in the Israeli-Hamas conflict requires a careful balance between technological advancements and ethical considerations. By prioritizing human oversight, accountability, and humanitarian principles, stakeholders can harness the benefits of AI while mitigating risks associated with its use in warfare. Such*

a multifaceted approach is essential for fostering responsible military engagement and enhancing the prospects for peace. The paper recommended emergency protocols that allow for the reevaluation of drone targeting decisions in real-time to help prevent unintended harm, especially in such rapidly changing conflict environments as the Israeli-Hamas conflict. But most importantly, there is a need to address the root causes of this Israeli-Hamas conflict. While the path to peace in this conflict is fraught with challenges, sustained commitment from local and international actors is essential to foster a durable resolution.

Keywords: *Artificial Intelligence (AI), Drones Attack, Military Precision*

Introduction

Artificial Intelligence is the simulation of computers to perform the activities supposedly performed by human beings excellently and timeously with environmental adaptability (Emegha, 2024). The evolution of conflict and warfare over the past few decades witnessed more autonomy, particularly as lethal autonomous weapon systems in civil and military systems have steadily increased. Reports indicate that the current rise in drones and the field of autonomous weapons has essentially been triggered by the spectacular advances in Artificial Intelligence (AI) and robotics technologies (Hasain, 2024; Global Times, 2024). Thus, the Israeli-Hamas war has seen significant transformations over the years, particularly with the introduction of advanced AI technologies. Petrovski et al. (2022) state that drones, empowered by AI, have become crucial tools in military operations, offering unprecedented precision and operational effectiveness. In military tactics, techniques, and procedures, Artificial intelligence (AI), according to Ekelhof (2024), is one of the most transformative technologies of our time which has been around for over six decades since John McCarthy and his colleagues developed the word "Artificial Intelligence" in 1956.

As stated by Holmes et al. (2022) and supported by Lin et al. (2023), Artificial Intelligence is any device or computer system able to perform tasks that generally require human intelligence. AI-enabled weapon systems are of particular concern because they potentially threaten the human race, as evident in the Israeli-Hamas conflict. Historically, Israel and Palestine have been embroiled in conflict ever since the State of Israel was founded, as land

control has often been a contentious issue. Shu, Song, and Zhang (2023) revealed that the Israeli-Hamas conflict is rooted in historical tensions dating back to the British mandate and the November 29, 1947, UN partition plan. Over 1300 persons were killed and over 1300 were taken prisoner when the Palestinian Hamas movement attacked an Israeli music festival and nearby communities on October 7, 2023. As a result, Israel's defense system, the "Iron Dome," which is among the most secure in the world, was compromised and Israeli land became vulnerable. Reports disclose that this has never been experienced since May 14, 1948, when Israel was established. Consequently, Hamas's unprecedented attack, resulting in heavy Israeli casualties and abductions, triggered a robust Israeli military response, including drone airstrikes on Gaza (Hasian, 2024; Damon, 2024). The conflict seems to have led to extensive loss of life, including combatants and civilians, and the situation continues to evolve daily (Takura and Takura, 2024). This surge has given rise to numerous legal and ethical conundrums needing to be suitably addressed, especially regarding AI-enabled weapons, which pose threats amid opportunities. The contestation is that AI-based drone applications and weaponry systems pose significant risks, mainly because of the brilliant behavior displayed by these systems, leading to a substantial increase in the delegation of cognitive functions to machines that can be lethal to the human race. This double-edged character of AI technologies points to the need for such study investigating the nexus between AI and military precision in drone attacks on the Israeli-Hamas conflict to proffer a research-based strategy for regulating the AI-enabled weapon systems development as well as to address a way forward to peace and conflict resolution.

Theoretical Explications

There are thoughts that the integration of Artificial Intelligence (AI) into military drone operations has significant implications for military precision, particularly in the context of the Israeli-Hamas conflict. This theoretical analysis explores several frameworks to understand the impact of AI on military operations and the ethical institutional culture (Emegha, 2022), its implications, and strategic outcomes for the Israeli-Hamas conflict in 2024 and beyond. On this note, this paper is within the ambit of the 'Just War' theory, the 'Technological Determinism' theory, and the 'Security Dilemma' theory.

(1) Just War Theory (JWT)

This theoretical model assesses the morality of warfare based on criteria such as just cause, proportionality, and discrimination between combatants and non-combatants despite the contestation that there is no morality in the war when an ideal of service to the nation by the military is involved (Emegha, 2022; Hagg, 2022). In assessing the grounds for 'Just Cause, ' the use of AI in drone strikes raises questions about whether the ends justify the means. JWT stipulates that military actions must be undertaken for a just cause, such as self-defense or protecting innocents. In the Israeli-Hamas conflict, both sides claim causes for their actions, complicating the moral landscape (Ikhenoba, 2023). Evaluating proportionality, JWT emphasizes that the anticipated benefits of military action must be proportional to the harm inflicted. Precision targeting can theoretically fulfill the proportionality criterion, but the ethical implications of civilian casualties remain a significant concern. This is because the application of AI in drone warfare raises questions about whether the use of lethal force is justified, especially when civilian populations are at risk. Petrovski et al. (2023) pinpoint that the use of AI in drone strikes aims to enhance targeting precision; however, the reality is often more complex, especially concerning adhering to the principles.

Despite technological advancements, drone strikes have resulted in significant civilian casualties, and the principle of proportionality challenges the ethical justification for these war actions, significantly if civilian harm outweighs military gains (Ilyas, 2024). The potential for misuse is also significant since the precision offered by AI can lead to justifications for military actions that might otherwise be deemed unjust. AI's capability to differentiate between combatants and non-combatants aims to meet the discrimination principle. A core tenet of JWT is the need to distinguish between combatants and non-combatants. AI-driven drones are designed to improve this discrimination, but their effectiveness can be undermined by algorithmic biases or data inaccuracies (Hamourziadou, 2024). Therefore, algorithmic accuracy failures or data biases can lead to tragic errors, undermining this principle. It is important to note that in densely populated areas like Gaza, distinguishing between military targets and civilians becomes increasingly tricky. In other words, the application of AI may not always lead to the desired outcome of protecting non-combatants, raising ethical concerns about using such technology.

Relevance of the Just War Theory to the Study

JWT provides a framework for evaluating the morality of warfare, emphasizing principles such as just cause, proportionality, discrimination, and the intention behind military actions. In the context of AI and military drone precision, JWT offers critical insights into the ethical implications of using advanced technology in conflict, particularly in the Israeli-Hamas situation. While AI has the potential to enhance military effectiveness and reduce civilian harm, significant challenges remain in adhering to the principles of just cause, proportionality, discrimination, and intention. For instance, despite precision strikes, civilians have been killed or injured due to proximity to targets or incorrect intelligence. A critical analysis of these principles is essential for developing responsible military policies and fostering accountability in using advanced technologies in conflict. Ultimately, the goal should be to align military actions with ethical considerations, prioritizing human dignity and pursuing lasting peace. JWT highlights the importance of intention in evaluating the morality of warfare, insisting that the deployment of AI in military operations should aim to achieve peace and stability rather than merely fulfilling tactical objectives. It is important to note that the intention behind drone strikes must consider the long-term implications for peace and security. If military actions exacerbate tensions and perpetuate cycles of violence, the moral justification of such actions becomes questionable.

(2) Technological Determinism Theory

Technological Determinism theory posits that technology shapes social structures and human behaviors; in other words, technology is a primary driver of social change and influences human behavior, relationships, and social structures (Hynek and Solovyeva, 2022; Kuo, 2021). In the context of military operations, particularly with AI and drone technology, this theory suggests that technological advancements shape the nature and conduct of warfare, influencing strategic decisions, ethical considerations, and operational outcomes. AI-driven drones provide enhanced surveillance and targeting capabilities, transforming military operations. Osimen, Newo, and Fulani (2024) denote that this technological advancement can lead to more precise strikes, potentially minimizing civilian casualties. However, reliance on such technology can lead to an overemphasis on precision

as a solution to complex conflicts, potentially downplaying warfare's human and political dimensions (Loewenthal et al., 2023).

Relevance of Technology Determinism Theory to the Study

The application of Technological Determinism theory in analyzing AI and military drone precision in the Israeli-Hamas conflict underscores the profound influence of technology on modern warfare. While advancements in precision targeting have the potential to enhance military effectiveness, they also raise significant ethical, accountability, and sociopolitical concerns. Understanding these dynamics is crucial for addressing the challenges posed by drone warfare and developing responsible policies that prioritize humanitarian considerations alongside military objectives. As the conflict evolves, it is essential to critically assess how technological advancements shape the nature of warfare and influence the prospects for peace. Scholars argue that the availability of AI-driven drones alters traditional military strategies, with the ability to conduct operations remotely and autonomously; hence, military planners in countries (as in the case of the Israeli-Hamas situation) are more inclined to engage in conflicts, believing that technological superiority can mitigate risks (Hasian, 2024; Onyigbuo, 2024; Moskalenko and Aiginger, 2023). This shift raises questions about the ethical implications of using drones in densely populated areas, where the risk of civilian casualties remains high. While it is true that combatants have died in the cause of the conflict, it is equally valid that almost 37,900 Palestinians, mostly civilians, have died, too. As such, the ethical and moral considerations center on the dehumanization of warfare as the Technological Determinism theory highlights how reliance on drones can lead to a detachment from the realities of war (Frantzman, 2021). Notably, the ability to conduct strikes from any distance may desensitize operators and decision-makers to the human cost of their actions. This dehumanization affects public perception of warfare and influences policy decisions, leading to more frequent military engagements.

Meanwhile, there are drawbacks to accountability challenges because the integration of AI complicates accountability. Morgan (2024) argues that it becomes difficult to ascertain responsibility for mistakes or civilian casualties when algorithms make warfare decisions. This, therefore, raises ethical concerns about who is held accountable for actions taken by

autonomous systems, challenging traditional notions of military responsibility. Implications of technology determinism for international relations are replete with security dilemmas, considering that the advancement of drone technology can further exacerbate security dilemmas among nations. Ekelhof (2024) expresses that countries may feel compelled to enhance their military capabilities in response to perceived threats, leading to an arms race in drone and AI technology. This dynamic invariably increases tensions and instability in conflict regions, such as the Israeli-Hamas context.

The theory also emphasizes the socioeconomic implications of AI-driven drone applications in the Israeli-Hamas conflict. No doubt, technological advancements create disparities between nations and non-state actors. The implication is that states with advanced drone capabilities, such as Israel, can exert significant military influence, while groups like Hamas may resort to asymmetric warfare tactics in response. Liu (2024) notes that this imbalance can perpetuate cycles of violence and hinder peaceful resolutions. It is rather disheartening and worrisome that the use of AI-driven drones affects civilian lives in conflict zones, often leading to increased casualties and destruction. As of now, conflicting estimates indicate that over 10,000 or 37 900 people have been killed since the Israeli-Hamas escalation began on October 7, 2023, with a significant majority of casualties occurring in Gaza, causing global economic issues, leading to increased food and energy prices (Yoganandham and Kareem, 2024).

Technological Determinism theory, therefore, emphasizes the need to consider the broader societal impacts of military technology, including the humanitarian crises that can arise from such conflicts. Suffice it that the rapid development of AI in military applications calls for the establishment and strengthening of international norms and regulations. Technological determinism suggests that if left unchecked, the influence of military technology can shape international relations in ways that prioritize technological capabilities over human lives vis-à-vis diplomatic solutions.

(3) Security Dilemma Theory

The Security Dilemma theory posits that actions one state takes to enhance its security can inadvertently threaten other states, leading to an arms race and escalating tensions (Hardy, 2023). In international relations, the security dilemma describes how one state's efforts to

enhance security exacerbate escalation potential. The proponents of this theory argue that integration of AI in military operations can create a security dilemma, as states perceive advances in drone technology as threats (Johnson, 2022). This could lead to increased militarization and countermeasures, escalating the conflict further; so, in the context of the Israeli-Hamas conflict, the introduction of AI and military drone technology creates a complex dynamic that reflects these principles and confusions (Hasian, 2024).

Relevance of the Security Dilemma Theory to the Study

The application of the Security Dilemma theory to the use of AI and military drone precision in the Israeli-Hamas conflict reveals the intricate dynamics of modern warfare in terms of the interplay of defensive and offensive actions, which creates a cycle of fear/escalation that complicates prospects for peace. The security dilemma theory emphasizes mutual perceptions of threat vis-à-vis escalating tensions (Mantock, 2024). For instance, the deployment of AI-driven drones by Israel is perceived by Hamas as a significant threat, thus prompting it to enhance its military capabilities, including the development of more advanced rocket systems and counter-drone technologies. Talking about the technological arms race, the theory holds that introducing AI in drone warfare can lead to an arms race where both sides strive to outmatch each other technologically. Israel's investment in advanced drone technology is prompting Hamas to seek asymmetric means to counteract this advantage, such as developing sophisticated tunneling systems and employing cyber warfare tactics.

This response illustrates the security dilemma, where defensive measures by one side provoke offensive reactions from the other co-occurring (Emegha, 2022). It also brings to the fore the 'Cycle of Fear' paradigm, whereby both parties may increasingly view each other's actions through a lens of suspicion (Hardy, 2023). For Israel, the use of drones to maintain surveillance and conduct strikes may be seen as necessary for national security. At the same time, Hamas interprets these actions as acts of aggression, further justifying its military responses. Issa and Yasin (2024) illustrate that each side feels pressured to escalate its military capabilities, which can lead to more frequent and intense military engagements. The result is a cycle of retaliatory actions that can spiral out of control, undermining prospects for de-escalation. While AI and drone technology may provide Israel with a

perceived advantage in precision strikes, this can create a false sense of security. The belief that technological superiority guarantees safety may lead to riskier military strategies, increasing the likelihood of conflict with a more significant impact on civilian populations (Chamoli, 2024). There is no doubt understating the fact that the security dilemma exacerbates the humanitarian impact of the conflict. As both sides engage in military operations driven by security concerns, civilian populations are bearing the brunt of violence.

Thus, the emphasis on military solutions to security dilemmas can overshadow the humanitarian needs of affected populations, complicating efforts for peace and stability (Lowenthal et al., 2024). These scholars further buttress that AI-driven precision strikes may still result in higher civilian casualties, leading to grievances and a cycle of retaliation. The longer the conflict persists, the more entrenched the grievances become, making future negotiations more difficult. Conversely, suppose both sides perceive each other as highly armed and willing to use force. In that case, it may paradoxically lead to stability where the fear of escalation prevents outright war. Mantock (2024), however, notes that this stability is precarious and can easily be disrupted by miscalculations or unexpected incidents. Therefore, to break this cycle, both parties must engage in confidence-building measures and pursue diplomatic channels that prioritize de-escalation and humanitarian considerations. Addressing the underlying security concerns through dialogue and mutual understanding can help mitigate the effects of the security dilemma and foster a more stable and peaceful environment. After the theories have been interrogated, the following section focuses on the history of the conflict.

Historical Trajectory of the Israeli-Hamas Conflict

Israel and Palestine have been embroiled in conflict ever since the State of Israel was founded on May 14, 1948. Tukura and Tukura (2024) posit that the Israeli-Hamas conflict is rooted in a complex history involving territorial disputes, national identities, and decades of violence. From a historical background, the early 20th Century witnessed tensions between Jewish and Arab populations in Palestine that began to rise during the British Mandate (1920-1948), fueled by competing nationalist movements. Shu et al. (2023) corroborate that the conflict is rooted in historical tensions dating back to the British

mandate and the 1947 UN partition plan. Jewish immigration increased, leading to disputes over land and resources; even when the United Nations had proposed a partition plan to create separate Jewish and Arab states, Arab leaders rejected it, while Jewish leaders accepted the plan; thus, the loggerheads led to violence. Following the declaration of the State of Israel in 1948, neighboring Arab states invaded. The war resulted in significant territorial gains for Israel and the displacement of hundreds of thousands of Palestinians, an event the Palestinians referred to as the "Nakba," meaning catastrophe (Liu, 2024).

In 1987, during the First Intifada (i.e., uprising against Israeli occupation), Hamas was established as an offshoot of the Egyptian Muslim Brotherhood, aimed at resisting Israeli control and promoting an Islamic state in historic Palestine. The creation of Hamas further increased already existing tension with intensified conflicts. Subsequently, the Oslo Accords were initiated in 1993 with agreements to establish a framework for peace and a two-state solution. Still, the Oslo Accords ultimately failed to resolve core issues, leading to frustration among Palestinians (Morgan, 2024). The second Intifada (i.e., uprising against Israeli occupation) from 2000 to 2005 brought about a resurgence of violence marked by suicide bombings and military operations. Tukura and Tukura (2024) revealed that this period deepened animosities and solidified Hamas's position as a significant political and military force. Munteanu (2023) pinpoints that owing to divergent viewpoints, the Palestinian groups of Hamas and Fatah were unable to agree in 2006 on whether or not to recognize Israel's independence and sovereignty. Fatah has been in favor of the agreement, especially at this time when a significant number of Palestinians are refugees in Gaza and adjacent countries. Hamas, which Iran and several Arab nations allegedly back, is supposedly motivated by a strong desire to wrest territory from the Israelis.

In 2007, Hamas took control of Gaza after winning parliamentary elections, leading to a violent split from the Palestinian Authority (led by Fatah). Israel and Egypt imposed a blockade on Gaza, exacerbating humanitarian conditions. Shu et al. (2024) affirm that since 2008, multiple escalations between Israel and Hamas have occurred, resulting in significant casualties and destruction in Gaza, with notable conflicts in 2008-2009, 2012, 2014, and the recent flare-ups in 2021 and 2023. One of the exacerbating issues is territorial disputes and the struggles for national identity and self-determination. Issa and Yasin (2024) reiterate that the ongoing violence is fueled by a combination of political, social, and humanitarian issues that have persisted for decades. Disputes over land, including the West Bank

settlements and the status of Jerusalem, remain central to the conflict. Israeli settlements are viewed as illegal under international law by many, further complicating peace efforts. Scholars maintain that political fragmentation via the division between Hamas in Gaza and the Palestinian authority in the West Bank kept undermining a unified Palestinian response to Israeli policies, hence complicating negotiations for peace (Munteanu, 2023; Liu, 2024). International involvement is also deemed a significant factor influencing dynamics. For instance, Iran supports Hamas, while the U.S.A. has historically aligned with Israel; such regional and global powers have varying interests in the conflict, impacting peace initiatives.

The most recent escalation in the Israeli-Hamas conflict began on October 7, 2023, when Hamas launched a large-scale attack on Israel, including rocket fire and incursions into Israeli territory. This prompted a significant military response from Israel, including drone airstrikes on Gaza (Hasian, 2024). Over 1300 persons were taken prisoner, and almost the same number were killed when the Palestinian Hamas movement attacked an Israeli music festival and nearby communities. Israel responded right away, declaring the geopolitical region was under 'total siege.' Palestine believed that the Western countries had given the Jews their lands, while the Jews, on the other hand, refuted the claim and linked it to theological epistemology (Damon, 2024).

The level of the conflict can be described as severe, with both sides engaged in intense military operations (Loewenthal et al., 2023). As of now, the conflict is ongoing, with continued hostilities and military actions reported. The situation remains fluid, with ongoing efforts for ceasefires and negotiations, but violence has persisted, leading to significant casualties and humanitarian concerns. The international community has expressed deep concern over the humanitarian situation, with calls for ceasefires and increased access to humanitarian assistance. However, the complexities of the conflict hinder effective responses and long-term solutions due to conflicting strategic interests. A sustainable resolution requires addressing these complex factors and fostering dialogue among all parties involved, but morality has been thrown to the dust with the deployment of AI-facilitated drones.

The Integration of AI into Military Drones and its Impact on Military Precision

As the heavily armed wing of any state, the military is an assemblage of professional bodies. Still, one of the major principles of the military is its subordination to a democratic civilian authority (Emegha, 2022). Hence, autonomy in civil and military systems has gradually increased over the past few decades; however, current interest in autonomous weapons has been triggered by the spectacular advances in Artificial Intelligence (AI) and robotics technologies (Panwar, 2023). Studies reveal that the Israeli-Hamas conflict has seen significant transformations over the years, particularly with the introduction of advanced technologies, especially as drones empowered by AI have become crucial tools in military operations, offering unprecedented levels of precision and operational effectiveness (Hasian, 2024; Ekelhof, 2024; Frantzman, 2022). AI-based applications and systems pose significant risks, mainly because of the brilliant behavior displayed by these systems, leading to a substantial increase in the delegation of cognitive functions to machines. Suffice it that the Israeli-Hamas conflict has seen significant transformations over the years, particularly as the role of AI in enhancing military precision during drone strikes poses broader implications for the conflict.

AI can identify patterns and predict potential outcomes, thus aiding strategic planning and operational execution. Yet, most of the time, the socio-strategic outcomes do not isolate combatants from civilians. Frantzman (2022) expresses that machine learning algorithms cannot enable warring parties to distinguish between combatants and non-combatants effectively; hence, potentially reducing civilian casualties and collateral damage is contestable. By automating certain functions, AI reduces personnel's exposure to danger in conflict zones (Onyigbuo, 2024). AI has enhanced autonomous drones and their operations, such that the development of semi-autonomous and fully autonomous drones represents a significant advancement in the military capabilities of the Israeli-Hamas conflict (Ekelhof, 2024).

It is worth saying that AI is playing a significant role in this conflict in terms of targeting and surveillance, as AI technologies are enabling sophisticated data analysis, thus facilitating enhanced targeting and surveillance capabilities. In the context of drone operations, AI systems highly process and integrate information from various sources (such

as satellite imagery, social media, and reconnaissance data) that creates a comprehensive situational awareness that informs precise military decision-making (Panwar, 2023). Hasian (2024) argues that the dynamic nature of the Israeli-Hamas conflict necessitates rapid decision-making, and integration of AI into military drones enables real-time decision support. Petrovski et al. (2022) sustain that AI can analyze incoming data in real-time, allowing commanders to make timely decisions based on current information. However, delegating lethal decision-making to machines raises ethical concerns regarding accountability and the moral implications of using autonomous systems in warfare.

Challenges of AI in Israeli-Hamas Drone Attacks

Although AI is reshaping the landscape of military operations in the Israeli-Hamas conflict, mainly through its application in drone strikes, there are grave threats to humanity. While it enhances targeting precision and operational efficiency, it also introduces complex ethical and strategic challenges. Scholars are unanimous in their opinion that the use of AI in warfare significantly raises profound moral questions, particularly as the delegation of lethal decision-making to machines challenges traditional notions of accountability (Petrovski et al., 2022; Panwar, 2023; Frantzman, 2022). Damon (2024) argues that assigning responsibility becomes complex in civilian casualties because when AI systems make mistakes (such as misidentifying a target), determining accountability becomes complex. This issue poses serious challenges in international law and military ethics since AI lacks human judgment and understanding of context or nuances, thus raising contestation about the moral justifications for their use in densely populated areas, like what happened in Gaza (Issa and Yasin, 2024).

Scholars argue that integrating AI in drone warfare influences the broader strategic landscape with the escalation of conflict (Moskalenko and Aiginger, 2024). The argument is that enhanced precision may lower the threshold for military engagement, potentially leading to more frequent and aggressive military operations. The ongoing dialogue surrounding the implications of AI in warfare will play a critical role in shaping future military strategies and international norms. Referring back to the theoretical analysis, it was pinpointed that the advancement of AI technologies could spark an arms race as adversaries seek to develop countermeasures and enhance their military capabilities. Chamoli (2024)

asserts that the development of AI in military applications may prompt adversaries to invest in countermeasures, leading to an arms race in AI technology. Hasian (2024) corroborates that this can destabilize regions and increase the likelihood of conflict. These scholars further pinpoint that the precision offered by AI could lead to a lower threshold for engaging in military operations, potentially escalating disputes. In other words, the perception of reduced risk might encourage more aggressive strategies.

While the autonomous operations of AI-enabled drones can reduce the risk to human operators, it raises questions about accountability and the ethical implications of machines making life-and-death decisions (Carter, 2023; Damon, 2024). Moreover, AI systems rely on data for training/operation, and in conflict zones, the quality of data can be compromised by misinformation or incomplete intelligence, leading to errors in targeting and unintended consequences. The use of AI in drone strikes is already facing public backlash, as most of the conflicts are perceived as dehumanizing warfare (Ekelhof, 2024). No doubt AI's role in military precision, especially in drone operations within the Israeli-Hamas conflict, presents serious challenges. Addressing the ensuing challenges will be essential for responsible military engagement and peace in the regions as these technologies evolve.

Impact of the Israeli-Hamas Conflict on Human Lives, Africa and the Global Economy

The ongoing conflict between Israel and Hamas has resulted in significant casualties and severe humanitarian concerns as thousands (over 10,000 people) have been killed, including both combatants and civilians. The majority of casualties have been reported in Gaza, where AI-enabled drone airstrikes have targeted Hamas infrastructure but also resulted in high civilian tolls (Hasian, 2024). Tens of thousands have been injured, with many requiring urgent medical attention, while the healthcare system in Gaza has been overwhelmed by the influx of casualties. Meanwhile, large numbers of people have been displaced within Gaza, with many seeking shelter in overcrowded facilities, exacerbating the humanitarian crisis with increasing humanitarian concerns. Damon (2024) found that the conflict has severely impacted access to food, clean water, and medical supplies, significantly as the blockade of Gaza complicates the delivery of humanitarian aid. There has been extensive damage to infrastructure, including hospitals, schools, and homes, which

has resulted in dire living conditions for many civilians. Chamoli (2024) established that the destruction of medical facilities and shortage of medical supplies have led to a deteriorating health crisis, with disease outbreaks and inadequate care for injuries.

Liu (2024) posits that civilians in Gaza and Israel are caught up in complex, violent situations that have overstepped conventional battle lines. Both sides of the conflict have found ways to legitimate the use of violence and continually swap accusations of violations of domestic and international humanitarian laws. The conflict shapes global alliances as countries align themselves with either Israel or Palestine, impacting international organizations like the UN and affecting resolutions and interventions. More so, the Israeli-Hamas conflict has significant implications not only for the Middle East but also Africa and the broader international community (Hasian, 2024). For instance, geopolitical alliances in Africa are affected as many African nations historically support Palestinian rights, viewing the struggle as part of a broader anti-colonial movement. According to Emegha (2019) and Ilyas (2024), this solidarity can influence geopolitical, diplomatic missions and relations with countries in the Middle East and affect citizens directly or indirectly.

Hasian (2024) affirms that countries with strong ties to Israel, like Egypt and South Africa, are experiencing internal divisions with public protests advocating for Palestinian causes, significantly affecting domestic politics. Also, humanitarian organizations and activists in Africa are mobilizing in response to crises in Gaza, drawing attention to human rights issues and humanitarian aid, which can lead to increased activism and pressure on governments. Scholars aver that the conflict resonates globally, affecting political, humanitarian, and economic landscapes in Africa and beyond (Moskalenko and Aiginger, 2024). The implications are felt through geopolitical alignments, security dynamics, and social movements, highlighting the interconnectedness of global conflicts and their far-reaching impacts. The conflict can exacerbate tensions and inspire extremist groups, leading to potential spillover effects in Africa because some groups may leverage the conflict to gain support or justify their actions. The conflict can also influence stability in African regions with existing tensions, such as North Africa, where Islamist movements may take inspiration from the conflict.

The economic implications of the conflict have been replete with disruptions in energy markets, as Yoganandham and Kareem (2024) found that the conflict is disrupting oil supplies and energy markets, impacting global prices, including in Africa, which relies on imports of fossil fuels. Countries that depend on trade with Israel or the Palestinian territories are gradually seeing economic repercussions from the conflict, which is affecting broader economic ties. The Israel-Hamas conflict and Gaza assault are causing global economic issues, leading to increased food and energy prices. Morgan (2024) affirms that the conflict reduces regional commerce with tighter financial conditions and rising energy costs. Due to the exacerbating global economic effects, especially in the Middle East, India is considering technology-driven trade finance options to mitigate these impacts. Geopolitical possibilities include Europe's recession, regional forces seizing control, the Lebanon war, and Iran targeting nuclear facilities.

According to Crawford (2023), the Gaza humanitarian crisis has sparked concerns about mass displacement in Egypt and Jordan, potentially impacting regional stability. Israel's relations strain is leading to diplomatic withdrawals as experts warn that support for Israel could further worsen trade relations and inflation while rising global crude oil prices could impact industries. The United States government is focusing on the Middle East, uniting funding for Israel and Ukraine, and pressing for a political settlement. Damon (2024) notes that the United States' response, led by President Biden, has been one of strong support for Israel's right to self-defense, aligning with America's long-standing alliance with Israel. However, this stance faces criticism due to the humanitarian impact on Gaza's civilians and calls for restraint and adherence to international laws. The conflict also poses broader security challenges for the US, including potential regional destabilization and geopolitical ramifications involving allies and adversaries.

Efforts for ceasefires and negotiations in the recent Israeli-Hamas conflict have included quite a few international mediation and regional initiatives (Ikhenoba, 2024). Countries like Egypt, Qatar, and Turkey have actively mediated between the two sides. Reports indicate that Egypt, in particular, has historically played a crucial role in brokering ceasefires (Liu, 2024). United Nations involvement has also been integral as the UN calls for an immediate ceasefire, emphasizing the need for humanitarian assistance in affected areas (Crawford, 2023). Bilateral talks are ongoing, even as there have been informal negotiations facilitated

by various international actors to reach a temporary ceasefire to allow for humanitarian aid and reduce civilian casualties (Damon, 2024). Public pressure and protests have also been significant as global disapproval and civil society calls have pressured governments to intervene and promote peace talks (Chamoli, 2024). However, despite these efforts, achieving a lasting ceasefire remains challenging, attributed to the deeply-rooted issues and ongoing hostilities, as the situation is highly fluid, with new developments occurring regularly.

Conclusion and the Way Forward in the Israeli-Hamas Conflict

The path toward resolving the Israeli-Hamas conflict is complex. It requires addressing a range of political, social, and humanitarian issues, but most importantly, it needs to curb the consequences of utilizing AI-enabled drones. It has been established that the integration of AI in military drone operations has transformed warfare dynamics, particularly in the context of the Israeli-Hamas conflict. However, moving forward, several key considerations can enhance the responsible use of AI while addressing ethical, strategic, and operational challenges. This paper states that the future of AI and military drone precision in the Israeli-Hamas conflict requires a careful balance between technological advancements and ethical considerations. By prioritizing human oversight, accountability, and humanitarian principles, stakeholders can harness the benefits of AI while mitigating risks associated with its use in warfare. This multifaceted approach is essential for fostering responsible military engagement and enhancing the prospects for peace.

(1) There is a need to establish robust human oversight in AI-driven decision-making processes to mitigate the risks associated with autonomous systems making lethal choices. This paper recommends that human operators remain integral in the decision loop to ensure accountability. Therefore, This paper calls for setting global standards in AI-driven warfare; by engaging in international dialogues to establish norms and regulations regarding the use of AI in military operations, we can foster cooperation and accountability among nations.

(2) Ethical standards/guidelines and a proper accountability system should be formulated and implemented for using AI in military operations. International, regional, and national agencies should ensure these guidelines prioritize minimizing civilian harm and maintaining proportionality, as this can help navigate the moral complexities of drone warfare.

(3) Talking about a proper accountability system, this paper reiterates that legal frameworks should be put in place to hold Israel, Palestine, and other parties accountable for violations resulting from AI-driven military actions. This should consider the definition of responsibilities in cases of civilian casualties. Humanitarian considerations must supersede any justification for war and the use of AI-enabled drones for combat, prioritizing the protection of civilian lives. Hence, there's a need to incorporate humanitarian law whereby AI systems are designed with an understanding of international humanitarian law to ensure compliance during military operations.

(4) Emergency protocols that allow for the reevaluation of drone targeting decisions in real-time should be implemented to help prevent unintended harm, especially in such rapidly changing conflict environments as the Israeli-Hamas war.

(5) Collaborative efforts for peace are quintessential. AI technology could enhance peacekeeping efforts, such as monitoring ceasefire agreements or assessing humanitarian needs in conflict zones, contributing to broader peace initiatives.

(6) Immediate ceasefire and de-escalation are necessary to facilitate humanitarian aid and reduce civilian casualties. International pressure and mediation could help establish a truce. Sustained dialogue between Israel and Hamas should be encouraged by neutral parties to de-escalate tensions over the long term. Most importantly, the unrestricted flow of humanitarian aid into Gaza is crucial; thus, international organizations should help coordinate efforts to provide food, medical supplies, and shelter. Reconstruction efforts to rebuild infrastructure and address the humanitarian crisis should be prioritized to stabilize the region.

(7) International bodies like the United Nations should advocate for peace and hold parties accountable for human rights violations. But most importantly, there is a need to address the root causes of this Israeli-Hamas conflict. Suffice that socioeconomic development through investments in education, employment, and healthcare in both Israeli and Palestinian communities is crucial to help address underlying grievances and reduce support for militant groups. Also encouraging grassroots dialogue initiatives between Israeli and Palestinian communities can further help build understanding and trust. While the path to peace is fraught with challenges, sustained commitment from local and international actors is essential to foster a durable resolution to the Israeli-Hamas conflict.

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