The Impact of Artificial Intelligence (AI) on using of Autonomous Weapons

تأثير الذكاء الاصطناعي على الأسلحة ذاتية التشغيل

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الملخص:

يتناول هذا المقال تأثير الذكاء الاصطناعي على تطوير واستخدام أنظمة الأسلحة ذاتية التشغيل ، وما يرافقه من تحديات أخلاقية وقانونية وأمنية كبيرة، سيما بسبب الافتقار إلى إطار تنظيمي عالمي موحد. وتعرف الأسلحة ذاتية التشغيل أو المستقلة، بأنها أنظمة قادرة على اختيار الأهداف ومواجهتها دون تدخل بشري مباشر، مما يثير مخاوف جدية بشان المساءلة والرقابة. إن التقدم السريع في مجال الذكاء الاصطناعي قد يشكل مخاطر على البشرية، مما دفع قادة ومنظمات عالمية إلى المطالبة بتدابير حوكمة، وتدابير احترازية أقوى لاستعمال هذه الأسلحة، خاصة وأن هذه الأخيرة تزيد من احتمال نشوب النزاعات، وتقلل من المسؤولية البشرية أثناء الحروب. وتستكشف هذه الورقة البحثية دور القانون الدولي في تنظيم تقنيات الذكاء الاصطناعي، وتسلط الضوء على الجهود العالمية الجارية، من مبادرات الأمم المتحدة والاتحاد الأوربي، لوضع معايير أخلاقية وأطر قانونية. لذلك يعد التعاون الدولي ضروري لضمان تطوير مسؤول للذكاء الاصطناعي مشددا على الحاجة إلى لوائح ملزمة، وإشراف بشري، وآليات المساءلة من أجل التخفيف من المخاطر المرتبطة بالأسلحة ذاتية التشغيل .

الكلمات المفتاحية:

الذكاء الاصطناعي- أنظمة الأسلحة ذاتية التشغيل- القانون الدولي- حوكمة الذكاء الاصطناعي- مسؤولية الدول.

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Abstract:

This article examines the impact of artificial intelligence on the development and use of autonomous weapons systems, and the significant ethical, legal, and security challenges that accompany them, particularly due to the lack of a unified global regulatory framework. Autonomous or independent weapons are defined as systems capable of selecting and engaging targets without direct human intervention, raising serious concerns regarding accountability and oversight. Rapid advances in artificial intelligence may pose risks to humanity, prompting global leaders and organizations to call for stronger governance and precautionary measures regarding the use of these weapons, especially since they increase the likelihood of conflict and diminish human responsibility during wars.

This research paper explores the role of international law in regulating AI technologies and highlights ongoing global efforts, including initiatives by the United Nations and the European Union, to establish ethical standards and legal frameworks. Therefore, international cooperation is essential to ensure the responsible development of AI, emphasizing the need for binding regulations, human oversight, and accountability mechanisms to mitigate the risks associated with autonomous weapons.

Keywords:

Artificial intelligence- Autonomous Weapons Systems-international law- IA Governance- state Responsibility.

Introduction:

Artificial intelligence has various challenges due to its global scope, fast development, and wide-ranging uses. The key issue includes ethical issues like bias and privacy, as well as socio-economic effects such as job loss and inequality. The lack of a unified global legal framework risks worsening these issues. Effective AI governance requires international cooperation across governments, industry, academia, and civil society, despite differing legal and cultural contexts. This article examines these issues and presents strategies for responsible global AI development[1].

Despite the unanimous recognition of the huge potential of artificial intelligence, an increasing number of scholars believe that the existing technological trends could lead to existential disasters of humanity. The existing governance models do not consider these disastrous consequences, but focus on more micro-level concerns such as data security, privacy, cyber threats, and consumer welfare. As a result, since the international public law does not have a mandate to reduce the likelihood of human extinction due to AI development, we have to question the particular obligations that sovereign states have to oversee and regulate AI progress.

At present, there is a lack of agreement on a definite definition of LAWS in an international community, but this analysis is based on a framework that would fit their intrinsic autonomous functionality. Although the general definition of LAWS as weapons that

can select and attack their targets without human intervention, the definition of what defines the true autonomy remains to be determined by the state governments, depending on such factors as the level of autonomy or the sophistication of the AI intelligence. As an example, the United States speaks of autonomous weapon systems as systems where, once activated, they do not require further human control. This category includes human-monitored autonomous weapon systems, which technically allow human operators to override control, but still have the ability to choose and attack targets without additional human intervention when activated. In effect, human intervention is only utilized in the first activation of the device. Therefore, the defining feature of any autonomous weapon system is the operational autonomy needed to target, aim, and shoot towards a target, which allows the system to independently evaluate a threat and decide whether to take a coercive action.

The United Nations has defined them as automated weapon systems that, when activated, can select and engage targets without the need for additional intervention from the human element operating them.

In March 2023, a group of industry leaders released an open letter to stimulate a six-month moratorium on advanced AI research due to their concerns about the fast advancement of this technology. In March 2024, the need to take decisive actions to prevent catastrophic global effects of artificial intelligence was then confirmed by the International Dialogues on AI Safety, a group of leading scholars focused on regulating the worst AI-related dangers. In addition, in his speech at the U.N. General Assembly in September 2023, UK Deputy Prime Minister Oliver Dowden highlighted that the risk of annihilation due to AI needs to be acknowledged as a planetary emergency on the same level as pandemics or nuclear war. This mood was also reflected in the World Economic Forum in Davos in January 2024, where U.N. Secretary-General António Guterres proposed the development of an exhaustive system of governance, in order to reduce the existential threat posed by the development of artificial intelligence. However, the creation of regulatory agencies to control such destructive risks is very slow. Modern policy frameworks do not pay much attention to the existential dimension and choose a piecemeal approach to specific issues, namely consumer protection, privacy, data security, freedom of speech, non-discrimination, and public health. Meanwhile, the Biden administration released an executive order aimed at normalizing corporate practices related to AI research in October 2023. However, this mandate did not capture the scope of the underlying threat, and limited it to issues such as cyber-security, disinformation, fraud, and labor market interruptions- a policy later repealed by the Trump Administration [1]. It argues in this paper that the magnitude of the threat posed by artificial intelligence is such that the absence of scientific confidence is not sufficient to justify regulatory inactivity; therefore, states have a duty to address the transnational threat that is arising because of the development of AI. This study explores the precautionary principle in its form of application in the realm of the international law of the country, especially the way it is applied in the context of international human rights regimes, and in particular the safeguarding of life. The theoretical assumption that underlies this analysis is that precautionary strategies have become the universal law of international jurisprudence and this can be applied to any existential threat that humanity is facing, despite the existence of some scientific uncertainty.

In the larger framework of safeguarding human rights, protection of life serves as a crucial tool by which precautionary measures can be implemented, and hence creating clear affirmative duties towards nation-states to prevent existential risks posed by artificial intelligence systems. Although the effects of AI technologies in all aspects of the society are certainly characterized by the multifaceted human rights concerns, in the context of this analysis, the concept of the safety of life is selected as an analytic subject matter because of the proliferation of threats that can be presented by high-tech systems of artificial intelligence[2].

The extent of the legitimacy of using autonomous weapons in combat operations:

A substantial body of scholarly opinion contends that autonomous weapons systems lack the operational capacity to adhere to fundamental tenets of international humanitarian law, including the distinction principle separating military personnel from non-combatant populations, proportionality requirements, the Martens Clause, and protections that safeguard vulnerable populations from severe harm. These commentators further assert that the proliferation of robotic and autonomous weapon technologies will precipitate widespread noncompliance with international humanitarian law provisions and may additionally facilitate evasion of legal accountability. Prominent scholars advancing this position include Micheal N. Schmitt [3], Peter Asaro[4] and Danial N. Hammond[5].

Over several decades, military forces have used numerous autonomous systems like heat-seeking missiles, torpedoes, and naval mines, which operate in primitively reactive modes that do not directly require human control. In the recent past, the situation has changed, though the paradigm of munitions development is changing with the introduction of artificial intelligence (AI). Although there are other dangers associated with the proliferation of AI-enhanced weaponry, these three dangers stand out. To begin with, these systems could reduce the barrier to entry into or intensification of military conflicts by states. Secondly, non-military scientific studies of AI are in danger of being hijacked or limited to support defense research. Lastly, the introduction of these types of autonomous technologies has the potential of creating an avenue through which the military players can hide or diminish human responsibility when it comes to making very important decisions concerning operations.

The International Obligation to Ensure Compliance of Autonomous Weapons with International Humanitarian Law

The international humanitarian law structure encompasses a number of guidelines, which outlaw certain types of weapons. These limitations are based on the fact that the harm caused by these weapons as compared to the legitimate purposes of combat are disproportionate and illegal and therefore limited to the neutralization of the fighting capacity of an enemy without exceeding the needs required by such a purpose.

This framework includes some supporting elements: the interdiction of weaponry with indiscriminate or gratuitous destructive capability, the obligatory compliance with the

standards of proportionality, and the sacrosanctity of fundamental human rights, especially the protection of life, that remains obligatory regardless of the requirements of war or national security emergencies. This view was reaffirmed in 1996 by the International Court of Justice in its advisory opinion on the use of nuclear weapons or nuclear threats of war, which stated that the principles of the international humanitarian law were peremptory norms as established under the 1969 Vienna Convention on the Law of Treaties.

The Vienna Convention of 1969 formally put in place a hierarchical approach of categorizing peremptory norms as opposed to the subordinate legal instruments. Article 53 provides that the invalidation of treaties is binding whereby at the time of the agreement, an agreement is inconsistent with a peremptory norm of universal international law. These norms can be defined as norms accepted by the international community of States that do not allow any exception; only a new norm with the status of the same legal force can replace it. In addition, Article 64 deals with the cases of a newly developed peremptory norm of universal international law; any existing treaty that is not compatible with this newly developed standard becomes ineffective and shall be ended immediately.

This legal regime is fundamentally based on the concept of humanity and aims to reduce the devastating effects of armed conflict to the fullest possible extent. These are peremptory directives; thus, any violation is a violation of a crucial interest common to the global community. This seriousness is due to the fact that these regulations are inseparably connected with the maintenance of human life as well as the larger range of fundamental human rights.

Concerning the following argument, historical examples of such disciplines like rocketry and nuclear physics provide educational parallels. These areas gained crucial strategic value during the cold war period, leading to the introduction of security clearance, censored books and restrictions on the academic mobility of practitioners. A parallel path could be formed as autonomous AI-driven technology continues to take over the world defense policies. When the same restrictions are imposed on non-defense AI research, it would result in crippling global collaboration, core AI research and much civilian innovation in scientific discovery and healthcare. This possibility is an urgent urgency, given the blistering pace of AI construction in the context of the increasing momentum of AI-driven weaponry.

Conditions to the creation of international civil liability in actions against infractions involving autonomous weaponry: To be legally acknowledged, a number of conditions have to be fulfilled: to begin with, the occurrence of an internationally illicit deed must occur; second, said behavior must be attributable to a particular sovereign state according to the current international legal guidelines, and thirdly, the conduct must be proven to have injured another sovereign state. It has been established through consistent international precedent that liability is based on the two pillars of fault and resultant damage and that a causal nexus between the two must be established to prove a claim of an internationally wrongful act.

Second, the attribution of state responsibility requires that the injury caused is substantial and that it is caused to another state. This harm can be of either the physical type, e.g. an incursion into national frontiers, or the moral type, e.g. an affront to the honour of the

state or to its diplomatic ambassadors. Moreover, an antecedent requirement of accountability is that the damages must be the direct result of an unlawful act committed by the respondent state and they must be caused by a breach of its binding international obligations, whether such obligations are prescriptive or proscriptive.

Basing on the basic principles of international accountability, violation of international standards of law is classified as an illegal act. This infraction happens when a state resorts to acts that are contrary to the international law, that is, when such acts are carried out in the absence of a lawful framework to justify them and oppose the interests of an injured sovereign state. An example of such a violation is the acquisition of lethal autonomous weapons systems. The idea of responsibility is invoked whenever the actions of a state are inclined to move slightly out of line with the international obligations outlined in the international commitments of the state. As a result, in case of a mismatch between the actions of a country and the duties that it should have, there is a liability- irrespective of whether such a state had an express intent or even a particular aim to perpetrate the infraction.

In case the accidental or unintended killing of non-combatant is to be treated as a violation of normativity, then the use of autonomous weaponry that causes such a killing is to be treated as an illegal action, thus the belligerent party must be held accountable internationally.

In the context of the requirement of an internationally wrongful act to create liability, it is important that the conduct must be imputable to a state prior to this state being charged with legal liability. The custom of the law of public international law is, that an act is imputed to the state when it is committed by one of its constituent organs or officials invested with power by its internal domestic laws.

The world community is starting to view artificial intelligence as a key technology that has far-reaching geopolitical implications. Although the AI has enormous advantages, it raises many concerns about the basic values, especially in relation to human-machine interface. This has brought in the need to actively discuss regulation in diverse international platforms though these discussions are at an early stage. An emerging global rulebook on AI is, however, emerging along five dimensions: (1) international jurisprudence, (2) soft law, (3) national laws with international implications, (4) self-regulatory business standards, and (5) practical normative force of technological innovations. This global regulatory framework is based on the collective assumption that AI requires a systematizing regulation, namely through a system that focuses on risk reduction and principles. At the same time, it becomes more and more evident that the criteria of AI implementation in both the private and the public realm must, to a significant extent, be based on the consistent body of principles [1].

Robotic harm

Injury caused by robots can be defined as any tangible or intangible violation of the rights or the safeguarded interests of a party to a conflict, as a result of the use of AI-controlled systems. It poses minimal procedural challenges to assess the harm caused by autonomous or semi-autonomous platforms of combat; the resultant harm is usually in the

form of destruction or deterioration of physical property and infrastructure. Since such effects have measurable economic aspects, determining the level of financial restitution that can be used to make redress is a simple legal endeavor.

Environmental damage resulting from the use of autonomous weapons

Among the damages caused by autonomous weapons are radiation, magnetic fields, and environmental hazards. There are negative effects of computers on the environment, as they contain nickel-cadmium batteries that contain the toxic element cadmium. When these batteries are buried, this toxic chemical element may leak into groundwater resources and then be disposed of according to a program for the disposal of toxic materials.Electronic waste has, therefore, become a threat to human health and the environment [(6)].

Among the different AI-related legal frameworks, the global legal environment is widely represented with the main focus on such core principles of human rights as the protection of individual liberty, non-discrimination, data privacy, freedom of speech including both general and political speech, and avoiding arbitrary administrative practices. Moreover, the international humanitarian law has institutionalized a wide variety of guidelines especially those governing the use of autonomous weapons in war-torn areas. Also, there are treaties specifically related to sectors, with the biggest one being the Council of Europe Convention, which covers such areas as data safety that continue to play a crucial role in the functioning of AI. The prevailing legal dilemma is nowadays how to adjust the old international laws to embrace artificial intelligence, and at the same time come up with new standards of regulation where the existing laws are no longer adequate.

Even with the limited AI technologies we currently possess, their usage is beginning to The technological environment is a fundamental change in the balance of power, which is especially acute in the legal field. Artificial intelligence is being integrated into many areas of law, such as intellectual property, trademark and tax, and corporate law, and additional fields that are now being subject to intense scholarly debate such as civil litigation. Matthijs Maas emphasizes the tremendous impact of AI on the international legal order. Although definite results are still a speculation, possible directions are the alteration of the current legal sources, the implementation of new frameworks, the technological replacement, or even the eventual erosion of the system. Interestingly, the design of the public international law exhibits a form of inherent resistance towards the incorporation of AI. There have been continued challenges with the direct application of machine learning to this area, such as the varying legal capacities of international subjects, the ambiguity of certain treaty texts, and the challenge of proving customary law. Moreover, the small amount of international case law is added to by the lack of a cohesive jurisprudential tradition, language barriers in local jurisdictions, and difference in application in different tribunals[7].

The United Nations based in The Hague has a specialized facility; the UNICRI Centre of Artificial Intelligence and Robotics. The organization focuses on the potential opportunities and capabilities of these emerging technologies, considering them as the key tool in both optimization of the internal administrative operations and in the achievement of the

Sustainable Development Goals. UNESCO took another strategic direction in a divergent approach. Later in 2021, the agency negotiated an international agreement with regard to the ethical aspects of artificial intelligence. Although the given framework is non-binding in nature, it serves as the channel of establishing a unanimity among the countries that are members of the UNESCO on the set of basic ethical standards and developmental principles that must inform the further development of AI.

Autonomy constitutes a multifaceted and intricate construct within international jurisprudence. Establishing a universally applicable characterization proves exceptionally difficult, as the semantic scope of this concept shifts contingent upon the specific subject matter under examination. Notwithstanding such definitional ambiguities, autonomy retains substantial significance in international law, particularly within domains encompassing state accountability mechanisms and the regulation of armed hostilities. Artificial intelligence systems are predicated upon certain degrees of self-directed computational processes; their operational architecture facilitates the reception of data, subsequent analysis thereof, and autonomous resolution. Consequently, such technologies function independently of direct human oversight, possessing the capacity to execute instantaneous determinations without external intervention. Comprehensive comprehension of artificial intelligence autonomy necessitates a foundational examination of how autonomy is conceptualized within international law. Such an inquiry requires consideration of (A) the manner in which this principle is articulated and substantiated under international legal frameworks (B).

The emergence of artificial intelligence introduces novel complexities to the realm of international security. Weapons systems deployed or intended for deployment within conflict zones—commonly designated as autonomous weapons—manifest in diverse configurations and possess capabilities targeting varied objectives across both terrestrial and digital domains. Nonetheless, rigorous evaluation of the degree to which artificial intelligence exhibits autonomy pursuant to international law standards remains imperative, alongside assessment of the consequential ramifications for questions of state accountability. Such examination necessitates scrutiny of artificial intelligence through the lens of how international law conceptualizes autonomy (A), and simultaneously demands investigation into the deficiencies inherent in prevailing terminology as applied to international legal structures (B)[8].

By what then is the definition of artificial intelligence in the context of international law? This question remains unclear in many aspects depending on the deployment, the field of operation and the level of human interaction in the system or how far it can go without human involvement. In the case of artificial intelligence taking action based on real-time orders, there is no doubt that the party that provides the orders may be held responsible to the artificial intelligence actions. However, such systems are mostly designed to be independent of such commands. In any case, the international law remains an option to enforce such technologies, even though any regulation in this case would require a radical reevaluation.

The use of AI creates great concerns about the potential of human rights infringements. In particular, there are some concerns regarding the negative impact of automation on human rights. Of particular concern to the Special Rapporteur on Extreme Poverty and Human Rights

has been the risks involved in the automation of social security and welfare calculation. This type of AI automation systems could overlook the structural disadvantages that lie in inequality, poverty and race (Alston, 2019, Para.). 28; Langford, 2020, 142). On the other hand, this technology also has the potential of making a positive contribution towards human rights protection. Such tools as Just Bot created by Tech-R and the University of Oslo have already shown significant value in helping people filing a complaint to the European Court of Human Rights (ECtHR) by reducing the risk of customary summary dismissal (Langford, 2020, 146)[9].

In addition to these technicalities, there is a larger question of the limited jurisdiction of the right to life, which, in the past, was the responsibility of sovereign states. This setup reflects the principles underpinning the international law of human rights that is conventionally based on a hierarchical relationship between the state and the person where the former is the main possible source of coercion. States are therefore the bearers of human rights compliance, and they are also liable to transgressions such as the illegal taking of life. In this regard, although private actors are at present not legally obligated by the international human rights law to adopt protective measures against AI-related existential risks, a certain trend of considering the roles of non-state actors can be identified. This is not yet established in the international law, but it is a wise idea to consider this future phenomenon and its possible implications on the design and implementation of artificial intelligence[10].

Governing AI: The role of the United Nations and other key actors

The United Nations has actively initiated various measures to promote governance frameworks for artificial intelligence, with the primary objective of leveraging the technology's inherent advantages while simultaneously mitigating its potential hazards.

– **High-Level Advisory Body on Artificial Intelligence (2023–2024):** The United Nations Secretary-General convened a panel of 39 leading experts in a bid to offer strategic advice on how artificial intelligence should be governed, consisting of 33 countries and diverse sectors and geographical locations. The main purpose of this effort was to reconcile international AI regulation with the current human rights requirements and the Sustainable Development Goals. The final report that this panel has come up with, expounds a detailed framework that intends to reduce risks that are related to artificial intelligence and at the same time encourage fair distribution of its life-saving abilities on a global scale.

– **The Global Digital Compact**: A comprehensive global framework for digital cooperation and governance of artificial intelligence.

– **ITU's AI for Good Initiative**: The United Nations' leading platform on artificial intelligence to solve global challenges. It connects policymakers, researchers, and businesses to promote the use of AI in support of the Sustainable Development Goals (SDGs).

– **UNESCO's Recommendation on the Ethics of Artificial Intelligence**: In 2021, UNESCO approved its first international AI ethics benchmark, an instrument committing all 194 of the constituent member countries. This report outlines the basic

requirements about data stewardship, institutional responsibility and transparency in operations. Moreover, as of January 1, 2025, the United Nations established the Office of Digital and Emerging Technologies (ODET). The main responsibility of this new body is to enable the implementation of the Global Digital Compact, in particular, the initiatives connected with artificial intelligence regulation. The European Union has established itself as a key regulator in the region, with the 2024 AI Act implemented. The first of its kind in the world, the holistic legal framework of AI, the Act is mainly aimed at promoting responsible and trustworthy AI development in Europe.

The OECD AI Principles that gained their first ratification in 2019 and are to be revised in 2024 are the first intergovernmental standard focused on promoting trustworthy and creative artificial intelligence that supports democratic values and human rights. This model provides a flexible, practical set of guidelines to governmental leaders and the stakeholders in the private sector [1]. Moreover, since non-human agents have no legal standing to be held responsible in case of the violations of international law, the actions of Lethal Autonomous Weapons Systems (LAWS) must, by definition, retain a certain objective connection to human agency.

In the New Agenda for Peace, the Secretary-General outlined particular suggestions on how AI and autonomous weapons systems are governed. This contained a clear call to a legally binding convention to criminalise LAWS that are run without human intervention or regulation with the aim of getting it adopted by 2026. Member States reiterated that increased cooperation is required and committed to continue discussions during the Summit of the Future in September and intends to come up with an instrument, without prejudice to its nature, and other potential actions to tackle emerging technologies in the domain of lethal autonomous weapons systems[11].

On July 20, 2023, the Secretary-General, António Guterres, released a Policy Brief named A New Agenda for Peace. The document is a roadmap, which outlines his strategic vision of collaborative international undertakings that will ensure stability and security in an international environment that is currently experiencing systemic changes, all the time staying firmly entrenched in international legal frameworks. This declaration is the main input of the Secretary-General to the discussion on peace and security, which should be discussed by Member States before the next Summit of the Future.

The formulation of "A New Agenda for Peace" [1] was in a very volatile and complicated global security environment. The writing holds a practical view on the vastness of modern challenges and provides a practical evaluation of possible solutions. Moreover, it also outlines the strategic plan that the Secretary-General has to enhance the multilateral efforts in strengthening collaboration in the face of a period of great global change.

A New Agenda for Peace assesses the modern range of peace and security threats, including development of the conflict landscape, the proliferation of chronic violence beyond the conflict setting, the potential threat of the weaponization of new technologies, the growing inequalities, the ongoing process of diminishing civic space, and the existential climate emergency. Further, the document highlights the prevalence of breaches of the UN Charter,

and the fact that an increasing backlash against human rights, in this case, the rights of women, is a significant normative challenge.

To effectively address these threats, A New Agenda for Peace encourages Member States to move beyond the current logic of competition and find avenues for cooperation and collective action to ***pursue shared interests***.

The paradigm of A New Agenda for Peace is based on the three pillars of universality, solidarity and trust. The document strengthens the key principles of international cooperation, emphasizing the paramount role of the UN Charter, the primacy of diplomacy, and the need to rebuild conflict-resolution structures to make major geopolitical actors trust each other. Moreover, it highlights the importance of regional set-ups and the essence of local efforts. The agenda outlines an extensive and broad range of proposals that recognize the highly interconnected nature of current global predicaments.

Pact for the Future[12]

The Summit of the Future, scheduled to take place in September 2024, will produce an action-oriented, inter-governmentally approved "Pact for the Future" (officially named Resolution A/RES/79/1), and will consist of a number of thematic chapters:

- Sustainable development and financing for development;
- International peace and security;
- Science, technology and innovation and digital cooperation;
- Youth and future generations; and
- Transforming global governance.

There is a paradigm shift in the international security structure. We have profound concerns about the spread of diverse challenges to world peace, the most prominent of them being the violation of the fundamental principles of the Charter of the United Nations, as well as the growing threat of nuclear warfare, which poses a real existential threat. In such a turbulent atmosphere, we are determined to achieve a lasting and fair peace. We reaffirm our commitment to act within the context of international law, and respect the aims of the Charter and fulfill our responsibilities in good faith. In addition, we have reiterated that it is crucial to promote the rule of law in the international system, in the spirit of the UN Charter, and recognize the importance of the Declaration on Principles of International Law on Friendly Relations and Cooperation among States. We reaffirm our commitment to the sovereign equality of all Member States, the principles of self-determination, the obligation not to use or threaten to use force against territorial autonomy and the peaceful settlement of international differences. Also, we commit to the observance of the Universal Declaration of Human Rights. UN still is a key pillar in the protection of world peace. The imperative to counter the growing number of threats on land, at sea, in the air, in space, and in cyberspace should be

complemented with a re-emphasis on the need to build trust, strengthen unity, and increase diplomatic cooperation.

The legal responsibility in the context of the implementation of AI and the introduction of the new technological systems is multifaceted in nature and some of the responsibilities are defined by the context of their use. Main categories of legal responsibility are as follows [13]:

Creator Responsibilities: Designers and constructors of intelligent systems have the original responsibility to remove technical defects or systemic malfunctions that might cause financial, intangible, or physical harm to stakeholders.

End-User Responsibility: Users or organizations that use these tools should make sure that their practice of using these tools is in absolute compliance with the current rules and ethical guidelines.

Primary Development Duty: Engineers and architects should take the initiative to ensure that their systems are defect-free and can cause harm and have a duty of care during the design stage.

Legal responsibility: It is the role of policymakers to come up with effective regulatory frameworks that define the extent to which technology can be used and forecast possible ethical pitfalls.

Operational Liability: The individuals dealing with the proactive implementation of the AI systems are required to comply with legal requirements and introduce strong security measures that would protect user information and personal privacy.

Oversight Function: Regulatory monitors are required to oversee the use of AI and guarantee full adherence to all the relevant legal standards.

Assessing the qualification of artificial intelligence under international law [14]:

Artificial intelligence has a set of peculiarities within the framework of international law. Its independence is highly limited to the field of operation. Moreover, the character of AI brings forth great analytical challenges, mainly due to the fact that such systems are usually designed by commercial organizations. As a result, corporate actors and not government officials are the architects who limit the functional behavior of these systems. As this technology has no inherent autonomy, the underlying mechanisms do not necessarily have a state-linked element, which limits the points of contact needed to apply international law. In this model, states usually only act as consumers in the lifecycle of technology. Therefore, the process of classifying AI in modern legal regulations is a tedious one, both the physical, material aspect and the dynamic nature of cyberspace.

Traditionally, the scope of the public international law has focused, but not exclusively, on the responsibilities of states, the actions of international organizations, and the position of individuals as the subjects of legal rights. Conversely, the area of private international law has long been more concerned with market mechanisms, administration of business agreements,

jurisdictional issues and enforcement of proprietary rights. Until relatively recently, the lifecycle of algorithmic systems, including their creation, market entry, and implementation, was mostly within this private realm and relied on the traditional law such as contract law, copyright, and tortious liability.

Heightened scrutiny regarding the ramifications and hazards associated with artificial intelligence precipitated a substantial transformation in the governance framework. This shift catalyzed the issuance of a Recommendation concerning the Ethics of Artificial Intelligence by prominent international bodies, particularly UNESCO, in November 2021. Formulated with universal applicability in mind, this instrument secured endorsement from all 193 Member States, albeit lacking mandatory enforceability. Correspondingly, the High-Level Advisory Body on Artificial Intelligence operating under the UN Secretary-General disseminated its comprehensive report, Governing AI for Humanity, on September 19, 2024. Whilst the report carries no legal obligation and functions as guidance for state conduct and multilateral institutional behavior, its promulgation underscores the urgency of establishing international AI governance mechanisms and constitutes an exhortation for nations to participate in coordinated international initiatives. Additionally, the Council of Europe's recent ratification of the Framework Convention on Artificial Intelligence and Human Rights, Democracy, and the Rule of Law (CETS No. 225) represents a watershed moment in the evolution of AI governance instruments, constituting the inaugural internationally recognized, legally enforceable framework[15].

Artificial intelligence is already making its impact in the field of international law, and it is in the area of international adjudication. Technology will not only prompt AI-based litigation in international courts but also shape the development of procedural requirements in these courts. Moreover, AI can have much more far-reaching consequences. Unlike the classical international jurisprudence which predominantly regulates state actors, there has always been a history of international adjudication creating deviations of these strict models, creating institutional structures that do not conform to basic legal axioms. These transitions can be seen in international investment law, in the development of specialized tribunals and in human rights law, in the adoption of individual petition procedures that enable direct legal standing to individuals. The principle of human-centricity is a core aspect of the synergistic development of AI and adjudication today. The future of the field, including the need to have technological due process and the formalization of redress against the abuses of AI-driven human rights violations, will reset the horizons of adjudication and international law more broadly. As a result of this, in a somewhat paradoxical twist, international adjudication seems to be in a unique position to promote the process of humanizing the global legal order[16].

Seeking global coordination for AI governance[17]

The ubiquitous growth of artificial intelligence requires a global governance framework that can maximize the benefits of development and at the same time counter inherent dangers. In response to this call, the Secretary-General of the UN launched a High-Level Advisory Body on AI. This professional group assesses the modern tendencies and suggests the mechanisms of international control, suggesting a comprehensive and inclusive approach.

The Body boasts of 39 experts representing various sectors of expertise and is engaged in aligning AI regulation with the basis of human rights and the Sustainable Development Goals. The initiative ensures that all these sectors communicate with one another, i.e. government organizations, business, and civil society, creating a foundation of mutual collaboration. The final publication of the group outlines a structural roadmap to counter the dangers related to AI and allocates its revolutionary promise on a global level, namely by:

- Promoting the idea that the United Nations should lead the establishment of a groundbreaking, universally reaching, and decentralized system of AI regulation, based on the principles of international cooperation.
- To improve current gaps within the current AI regulation mechanisms, promoting a series of seven separate strategic initiatives aimed at correcting the current deficiencies is essential.
- Opening up governments and various stakeholders to the joint-governance processes, so that AI development can be strongly geared towards facilitating and protecting the promotion of universal human rights.

Role of AI in Enhancing Data Analysis and Predictive Modeling in Diplomacy: AI in Diplomatic Decision-Making

How is AI used to improve data analysis in diplomatic contexts?

The artificial intelligence platforms have an unmatched ability to analyze vast volumes of data much faster than human cognition, and this offers a crucial tactical advantage in the statecraft. This speedy processing expertise allows AI to incorporate data crucial to diplomatic language, enabling envoys to create more substantiated decisions and create robust models to address complex international issues. By predicting the moves of the countries in multilateral settings, such as UN General Assembly, AI can play a groundbreaking role in streamlining the analytical procedures, enhancing a deeper understanding of diplomatic relations and strengthening the effectiveness of negotiation strategies.

Also, the integration of artificial intelligence into international relations is leading to the development of new technology diplomacy, a new paradigm in which innovation is used to encourage cooperation and defuse tensions. This proactive approach goes beyond strengthening the traditional diplomatic approaches and provides the avenues towards greater transparency and justice in international relations. It is therefore crucial that the government officials embrace predictive modeling fueled by AI with the consideration of deploying these tools responsibly to increase positive effects and reduce the possible risks[18].

Artificial intelligence is not just a catalyst in foreign affairs; it is literally changing the established protocols. It has the ability to support the diplomatic corps with augmented intelligence by offering advanced analytical reasoning and strategic choice capabilities. As an example, think of computational models that can process large volumes of international data to predict regime instability in sensitive regions, predict fiscal deterioration of key partners, or

even fundamental changes in the attitude of the population on controversial topics. Policymakers and envoys have a huge advantage in such intelligence because it provides them with a great edge in gauging the pre-emptive strategies and in adjusting their diplomatic positions.

The implications of implementing artificial data in autonomous systems have not been substantially discussed in critical United Nations security fora, namely, the Group of Governmental Experts (GGE) on emerging technologies related to lethal autonomous weapons systems (LAWS) and the Open-ended Working Group (OEWG) on the security of information and communications technologies (ICTs). However, the advantages and threats of synthetic data are very relevant to these discussions and the wider discourse of international security about AI. Particularly, GGE on LAWS participants have expressed concerns about how increased system autonomy may contribute to unintended harm, especially where the training datasets are not large enough to provide strong calibration. Moreover, OEWG on ICTs members have discussed the possibility of AI-based cyber-attacks to self-correct against countermeasures, making them more difficult to detect and mitigate. Because the development and use of synthetic data can directly contribute to and support these AI-enabled cyber-attacks, it is urgent that its use in autonomous systems does not subvert established responsibilities under international law, including international humanitarian law, or the principles of the Responsible AI which is the general doctrine that AI development must be lawful, ethical, secure, safe, and accountable[19].

Having real human control over these platforms poses a great challenge. Since the autonomous components have to use autonomous decision-making mechanisms to realize a working swarm, it is not only impossible to impose control over such groups but also negatively impactful. Since artificial actors do not have a legal personhood to be responsible in international humanitarian law violations, the final action in any action committed by LAWS should be linked to a human actor.

In his New Agenda for Peace [1], the UN Secretary-General has outlined certain principles related to controlling artificial intelligence and autonomous weaponry. This was accompanied by an official proposal of a treaty, in a legally binding form, to ban Lethal Autonomous Weapons Systems (LAWS) that perform without human intervention, with 2026 being the deadline to finalize the treaty. Following this the involved Member States at the September Summit of the Future undertook a statement supporting the need to have further cooperation with the view of the development of an international tool- the particular nature of which has not yet been determined- as well as with other tools aimed at regulating the threats of new technological trends in autonomous weaponry [20].”

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