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Commitment to Control Weaponised Artificial Intelligence: A Step Forward for the OSCE and European Security

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The Organization for Security and Co-operation in Europe (OSCE), jointly with the Institute for Peace Research and Security Policy at the University of Hamburg (IFSH) and in partnership with the Geneva Centre for Security Policy (GCSP), Moscow State University of International Relations (MGIMO) and the Vienna Centre for Disarmament and Non-proliferation (VCDNP), has launched an "OSCE-IFSH Essay Competition: Conventional Arms Control and Confidence- and Security-Building Measures in Europe". The project aims at facilitating the continuity of knowledge and expertise on arms control and CSBM processes at the OSCE among students and recent graduates interested in peace and security studies. This essay has participated in the 2021 competition and has been awarded the first prize ex-aequo.

Key Points

- The global debate on weaponised artificial intelligence (AI) often focuses on futuristic "killer robots", which risks overlooking the fact that these technologies are already part of the security landscape.
- Diminishing human control over the use of force and the differences in states' discourse pose a considerable risk for European security and stability.
- The impact of AI is not inevitable, and states should address this issue through political means, such as a political declaration with a commitment to ensuring human control over the use of force.
- With its inclusive membership, the Organization for Security and Cooperation in Europe (OSCE) can and should become the platform through which its participating States can take a step forward in the global debate on weaponised AI.

About the Author

Anna Nadibaidze is a PhD fellow at the University of Southern Denmark's Centre for War Studies. Her doctoral research explores the relationship between the development of Artificial Intelligence (AI) and Russian state identity. She is also a researcher for the European Research Council-funded AutoNorms Project, which examines how autonomous weapons systems shape international norms. She holds an MSc in International Relations from the London School of Economics.

Introduction

Recent technological and political developments in OSCE participating States suggest a strong interest in pursuing, testing and using weaponised AI and weapons systems with increasingly autonomous features controlled by algorithms. In May 2021 Defence Minister Sergei Shoigu announced that Russia had begun producing combat robots "capable of fighting on their own",[1] while the French Army is planning to introduce robotic systems by 2040.[2] The United Kingdom (UK) government has stated its objective of achieving "a leading role in critical and emerging technologies"[3] and has established a Defence Artificial Intelligence and Autonomy Unit to better understand them.[4] In the United States, the National Security Commission on Artificial Intelligence has urged the government "not [to] be a witness to the AI revolution in military affairs".[5]

The global discussion about autonomous weapons systems is often framed in a futuristic way and focuses on lethal autonomous weapons systems (LAWS) – colloquially called "killer robots" – or the "AI arms race". But weaponised AI is already a reality of European security. Thus far participating States have been reluctant to utilise the OSCE platform to address the risks caused by the increasing autonomy of weapons systems. Building on this issue, this essay intends to address the following questions: (1) how does the lack of regulation of weaponised AI affect security and stability in Europe? and (2) what role can the OSCE play in mitigating the risks related to weaponised AI?

The global discussion about autonomous weapons systems is often framed in a futuristic way, but weaponised AI is already a reality of European security.

Weaponised AI practices: implications for European security

A United Nations (UN) Security Council report published in March 2021 stated that "lethal autonomous weapons systems were programmed to attack targets without requiring data connectivity between the operator and the munition" during the Libyan civil war, referring to the Turkish-made Kargu 2 armed loitering drone.[6] This sparked a wave of worldwide media reaction, with many headlines claiming that the "age of autonomous killer robots" has arrived.[7] While it is difficult to assess whether a weapon system has been operated in an autonomous mode, whether in Libya or elsewhere, this episode indicates that there is increased public awareness that AI-based weapons are currently being developed, tested and used.[8] In fact, more attention should be paid to the fact that AI-based autonomy at various levels is already present, among others in armed aerial loitering drones, ground vehicles and air defence systems. The concept of autonomy has many definitions and interpretations but is generally understood to be the ability of a machine to perform an intended task without human intervention by using the interaction of its sensors and computer programming with the environment.[9]

Weaponised AI is affecting European security and stability in two main ways. Firstly, due to the absence of international regulations on the use of weaponised AI, the growing trend of automation and autonomy in weapons systems is silently changing the way in which humans are involved in the use of force.[10] Current applications of weaponised AI are shifting the understanding of human control involved in critical functions of weapons systems, especially those of identifying and attacking targets.[11] For example, many OSCE participating States use air defence systems with automatic or semi-automatic features. The automation of critical functions of air defence systems "has diminished the capacity of human

operators to exercise meaningful human control over specific targeting decisions".[12] The use of autonomy is gradually changing warfare norms, similarly to the way in which the proliferation of armed drones has encouraged targeted killing operations.[13] Such developments pose legal, ethical and security risks.

The diminishing role of human control over weapons systems also infringes upon several principles of international humanitarian law (IHL) applicable to armed conflict.[14] The principles of moral responsibility and accountability are challenged by the process of delegating crucial decisions such as selecting and attacking a target to an autonomous function that has no moral agency.[15] Current AI-based weapons systems are said to be unable to satisfy the requirements of distinction between legitimate and illegitimate targets during combat. These types of weapons systems lack the situation awareness necessary to discriminate between combatants and civilians.[16]

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Moreover, a diminishing human involvement in the operation of weapons systems with autonomous features has substantial security risks, since the risk of potentially catastrophic failure "can never be entirely eliminated".[17] Humans do not fully understand AI-based weapons systems, and the declining role of humans in their operation exacerbates this knowledge gap. As a UN Institute for Disarmament Research report has noted, "All complex weapon systems can have failure modes that cannot be foreseen. But it is likely to be harder to anticipate, quantify and characterize the risks associated with those issues in autonomous weapons".[18] The factors causing these risks include an acceleration of the speed of warfare,[19] a destabilising effect,[20] the strengthening and "normalisation" of practices such as targeted killings,[21] an increase in the asymmetries of warfare,[22] and the proliferation of autonomous weapons among terrorist organisations and non-state actors.[23]

Both Azerbaijan and Armenia used uninhabited aerial vehicles during the 2020 Nagorno-Karabakh conflict, and several IHL violations such as indiscriminate attacks on civilians were recorded.[24] While these weapons systems are not officially classified as LAWS, many analysts have deemed their use to be an efficient way of conducting warfare that could contribute to other states' pursuit of similar technologies. Since there is no way of verifying the level of human control over these systems, operational practices are silently continuing to change the norms of war and legitimise the use of weaponised AI. In other words, "the operational trend towards developing AI-enabled weapon systems continues and is on track to becoming established as 'the new normal' in warfare".[25] While there are no legal norms defining a responsible use of weaponised AI, the way in which states use this technology will continue to shape the way warfare is conducted and may increase risks to European and global security.

Secondly, the discourse surrounding weaponised AI – i.e. how OSCE participating States talk about LAWS – also has a considerable impact on European security. Both a common definition of LAWS and agreement on the appropriate level of human control over weapons systems are lacking, resulting in the misinterpretation of the risks that arise. Looking at the discourse of three major players in European security – France, Russia, and the United Kingdom – one sees that their official positions converge on the importance of retaining human control over these weapons. The French Armed Forces minister has said that "France refuses to entrust the decision of life or death to a machine that would act in a completely autonomous manner and would be beyond any human control".[26] Russia has said that it "is committed to the need to maintain human control over

LAWS, no matter how 'advanced' these systems may be".[27] The UK Ministry of Defence has noted, "the operation of our weapon systems will always be under human control and no UK weapons systems will be capable of attacking targets without this".[28]

Nevertheless, autonomy and the concept of appropriate human control over weapons systems are perceived differently. Russia remains opposed to a legally binding treaty that would ban LAWS, arguing that the definition of LAWS should "strike a balance between humanitarian concerns and [the] legitimate defence interests of states".[29] France has suggested a division between "fully" and "partially" LAWS and is only prohibiting "fully" autonomous weapons.[30] Meanwhile, the UK has stated that "an autonomous system is capable of understanding higher-level intent and direction", a definition that is more precise and constraining on the user[31] and is "clearly out of step with the definitions used by most other governments".[32]

As a possible response, several states, scholars, and civil society organisations have been arguing for a ban on LAWS.

As a common denominator, these states agree on the principle that weapons systems should not function completely autonomously. However, the differences in their views create misperceptions about the uses of AI, specifically among the leading states in this sphere, which are all carefully watching one another's technological developments. There are risks of misunderstanding, for instance when one state is developing a weapon system that another state considers to be a lethal autonomous system. Such communication issues can lead to a security dilemma in which "one state's pursuit of greater automation and faster reaction times undermines other states' security, leads them to similarly pursue more automation just to keep up" and encourages experts to speak of an "AI arms race".[33]

As a possible response, several states, scholars, and civil society organisations have been arguing for a ban on LAWS. Since 2013 this issue has been discussed in the framework of the UN Convention on Certain Conventional Weapons (CCW). A Group of Governmental Experts (GGE) on emerging technologies related to LAWS was established in 2016 to pursue the debate in a more formal setting. However, the discussions are often framed in futuristic terms, focusing on "killer robots" and their potential to operate fully autonomously and without human oversight, while existing weapons systems with increasingly autonomous features already have the potential to affect security and stability.

At the same time, the implications of weaponised AI for European and international security are not set in stone. Ultimately, AI is not an agent that decides its own path. The trajectory of weaponised AI, as other technologies in the military sphere used for conventional weapons, is not inevitable. The AI arms race scenario may or may not develop: much will depend on how states decide to use the AI capabilities that they are pursuing.

Strengthening human control: the role of the OSCE

Reaching a common position on weaponised AI regulation is challenging. The current global and European political atmosphere is one of distrust, particularly between two major European security players: Russia and the United States. In June 2021 both President Joe Biden and President Vladimir Putin said that the bilateral relationship "has deteriorated to its lowest point in recent years".[34] There is also distrust of technologies such as the Internet, AI, 5G, and robotics, not least because they can be weaponised and used for threatening activities such as cyber attacks. This environment makes it difficult to attain a common understanding and commit to agreed principles on the use of weaponised AI. Nevertheless, the OSCE possesses some key advantages that could make it the platform for taking a step forward in the global debate.

The OSCE's inclusive approach is needed to show that tensions can be dealt with in a forum rather than on the battlefield.

Just like the CCW, the OSCE operates by consensus, which requires it to seek a compromise among participating States on whatever issue is being discussed. However, the organisation has been historically known for its ambition to form an inclusive security community and to build practices that "suggest a new model of international security" that is "comprehensive", "indivisible", and "cooperative".[35] The OSCE's predecessor, the Conference on Security and Cooperation in Europe, was a symbol of détente between the United States and the Soviet Union, and a place for two rivals to find compromise on security issues, demonstrating the possibility of coexistence on the European continent.[36] The OSCE has not only been able to survive, but also to adapt to the rising security challenges of the new world order. Its broad membership and comprehensive approach to security make it a key – if not the most – legitimate institution for European security.[37] At a time when some experts debate whether Russian-US relations have entered a new cold war, the OSCE's inclusive approach is needed to show that tensions can be dealt with in a forum rather than on the battlefield.

Other international institutions have demonstrated their ambitions to create some form of AI regulation. In April 2021 the European Commission presented its legal framework proposal, which could lay down a path towards defining a regional approach to governing weaponised AI.[38] The North Atlantic Treaty Organization (NATO) has also set out its principles for the responsible use of AI in the area of defence.[39] The key difference is that these institutions have favoured exclusive membership in terms of which prospective countries need to fulfil specific conditions to join. However, the OSCE has relatively broad accession rules because it was initially based on the concept of geopolitical diversity.[40] Settling the differences and misunderstandings between different actors, especially Russia and the United States, is a key step in achieving a security agreement such as a commitment to human control over weaponised AI. In recent years the Russian discourse has expressed disappointment that Western countries have made NATO the main European security organisation.[41] By engaging with Russia on the issue of weaponised AI within the OSCE framework, the United States would contribute to easing the tensions between it and Russia, while also diminishing the chances of misunderstanding and misinterpretation. The OSCE's inclusive membership is thus a valuable advantage in terms of building trust and mitigating the security implications of modern technologies.[42]

What should be the way forward? In the 2019 Luxembourg Declaration on Advancing Sustainable Development to Promote Security, the OSCE

Parliamentary Assembly urged "participating States to support international negotiations to ban lethal autonomous weapons with a view to establishing international, legally binding rules".[43] A legally binding treaty banning the development of weaponised AI would be challenging, given that, unlike nuclear weapons or blinding lasers, AI is not a specific type of weapon and can also be applied for civilian use.[44] Some participating States hold the position that a ban will affect the development of useful civilian technology. Within the framework of the CCW, Russia has argued that banning LAWS too hastily could "hinder technological progress",[45] while the UK government believes that "a legally binding instrument which hampers the legitimate development and use of such technologies would be counterproductive".[46]

As a realistic starting point, the OSCE's confidence- and security-building measures (CSBMs) could provide a framework to exchange information and observations on the use of weaponised AI, in order to facilitate communication and dialogue.[47] The OSCE already has CSBMs for information communication technologies, which, like weaponised AI, create "an area with much room for speculation, doubt, and ambiguity" and "increase the potential for tensions between States".[48] There is also the potential to go further than exchanging information informally within the CSBMs framework.

Shifting the discussion towards the current impacts of weaponised AI rather than the potential future impact of "killer robots" would help to mitigate the risks inherent in these technologies.

Based on the recommendations of the International Panel on the Regulation of Autonomous Weapons, the next step should be to "focus on the obligation to maintain human control over the use of force", which would "apply to all conventional weapons".[49] Taking this path will avoid the debate on defining LAWS, which has been hindering the progress of the CCW discussions. In 2019 the GGE on LAWS adopted a set of guiding principles that are broad, have no legally binding force and do not clarify the concept of human control, only stating that "human responsibility for decisions on the use of weapons systems must be retained since accountability cannot be transferred to machines".[50] While OSCE member States accept in principle the importance of human control, they have until now not been able to agree on a common definition of this concept. The commitment to human control should be enshrined in a normative framework such as a political declaration or a manual of best practices. Any such document would already be a step forward. It could be part of the Vienna Document or the result of a new OSCE working group.

Importantly, an OSCE political declaration or guide on human control and weaponised AI would not undermine or negate the efforts at the CCW but would build on them. Shifting the discussion towards the current impacts of weaponised AI rather than the potential future impact of "killer robots" would help to mitigate the risks inherent in these technologies. It would demonstrate that finding consensus, especially in an atmosphere of political distrust, is possible. While debates at the CCW continue, the operational trend towards further autonomy in the armed forces of OSCE participating States is a reality. Practices related to the use of weaponised AI have the potential to shape warfare norms. Yet this trajectory is not inevitable, and with the right approach, a political declaration containing a common definition of human control would be a realistic achievement.

A political declaration should therefore contain a commitment to retaining human control over AI-driven weapons systems. This would be a crucial step towards addressing regional security threats and creating an international framework on weaponised AI. The history and membership of the OSCE make it the most appropriate organisation to build trust and take a key step forward on weaponised AI when global discussion at the UN is stalling and operational trends continue to increase the use of autonomous weapons systems.

Conclusion

Current practices related to the use of weaponised AI are already impacting European stability and security. Operational trends that reflect a reduction in the level of human control over weapons with increasingly autonomous features pose significant legal, ethical and security risks. Moreover, the lack of definition of LAWS and agreement on an appropriate level of human control among states creates uncertainty and potential misinterpretation. However, the trajectory of AI is not permanently set to be an "arms race". Finding a common agreement is a challenging, but not impossible task. The OSCE is a promising platform to build on the stalled discussions at the CCW, because it has a history of acting as a bridge between various perspectives of European security. It is an inclusive organisation that brings together the key developers of weaponised AI and players in European security. By debating this issue at the OSCE and agreeing on a political declaration containing a commitment to human control, participating States will address some of the risks of autonomous weapons systems and demonstrate the relevance of the OSCE in tackling the impact of modern technologies and their use in conventional weapons.

The OSCE is a promising platform to build on the stalled discussions at the CCW, because it has a history of acting as a bridge between various perspectives of European security.

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