

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

Submitted by

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Abstract

This essay examines the impacts of weaponised Artificial Intelligence (AI) for European security and proposes solutions to mitigate the risks caused by the lack of regulation of autonomy in weapons systems. Studying how OSCE participating States use and talk about weaponised AI, it demonstrates that the diminishing human control over the use of force and the differences in States' discourses pose a considerable risk for regional stability. At the same time, it suggests that the trajectory of the impact of AI is not inevitable, and that States should address this issue via political means, specifically a political declaration with a commitment to human control over the use of force. Finally, it argues that due to its inclusive membership, the OSCE can become the platform which can build trust and consensus, two necessary elements to make a step forward in the global debate on weaponised AI.

Introduction

Recent technological and political developments in participating States of the Organization for Security and Co-operation in Europe (OSCE) suggest a strong interest to pursue, test and use weaponised Artificial Intelligence (AI), specifically weapons systems with increasingly autonomous features operating on the base of algorithms. In May 2021, Defence Minister Sergei Shoigu announced that the Russian Federation has begun producing “combat robots capable of fighting on their own” (TASS 2021). According to media reports, the French Land Army is planning to introduce robots by 2040 (Barotte 2021). The UK Government stated its objective of achieving “a leading role in critical and emerging technologies” (HM Government 2021, 38) and has established a Defence Artificial Intelligence and Autonomy Unit to better understand them (Ministry of Defence 2020, 15). In the United States, the National Security Commission on Artificial Intelligence (NSCAI) has urged the government to “not be a witness to the AI revolution in military affairs” and “deliver it with leadership from the top, new operating concepts, relentless experimentation, and a system that rewards agility and risk” (2021, 77).

While the global discussion about autonomy in weapons systems is often framed in a futuristic way and focuses on fully lethal autonomous weapons systems (LAWS) – colloquially called ‘killer robots’ – or the ‘AI arms race’, weaponised AI is already a reality of European security. Due to its current wide-ranging impacts, this issue deserves the attention of the OSCE and especially the military-political component of its multidimensional approach to regional security. Nevertheless, so far participating States have been reluctant to benefit from the OSCE platform to address the risks caused by increasing autonomy in weapons systems. Building upon this puzzle, this essay intends to address the following questions: **How does the lack of regulation of weaponised AI affect security and stability in Europe? What role can the OSCE play in mitigating the risks related to weaponised AI?**

In the first section, I argue that the international debate on weaponised AI should take existing weapons systems as a starting point and highlight the impacts of practices related to weaponised AI for European security and stability. By analysing how weaponised AI *is used* and *is talked about*, I point to the issues of diminishing human control over the use of force as well as the uncertainty caused by the lack of a common definition of LAWS among OSCE participating States, while examining the case studies of France, Russia and the UK. Further, I argue that the trajectory of the impact of weaponised AI for European security and stability is not set in stone and that the current framing of the debate overestimates the agency of AI and its military uses. Therefore, there is a possibility of changing the trajectory of this impact by, as a first step, agreeing on basic principles about responsible use of weaponised AI.

In the second section, I argue that, given its large membership which includes the Russian perspective, as well as its historical role as a consensus-builder and a forum for bridging East-West tensions, the OSCE has a key role to play in terms of re-structuring the global debate on weaponised AI. The global political tensions between Russia and the United States make an agreement on emerging technologies such as AI more challenging, but not impossible. At a moment when the debates on LAWS at the United Nations are stalling, the OSCE can and should take a step forward by building consensus on guiding principles, issuing a political declaration with a commitment to human control over weapons systems, and demonstrating that the impact of AI depends on how states decide to use it.

Weaponised AI Practices: Impacts for European Security

A United Nations Security Council (UNSC) report on the security situation in Libya, published in March 2021, mentioned that “lethal autonomous weapons systems were programmed to attack targets without requiring data connectivity between the operator and the munition: in effect, a true ‘fire, forget and find’ capability” during the Libyan Civil War (2021, 17). This paragraph sparked a wave of worldwide media reactions reaching a global audience, with many headlines claiming that the “Age of Autonomous Killer Robots” has arrived (Vincent 2021). While it is challenging to assess whether a weapons system was used in an autonomous mode, whether in the Libyan case or elsewhere, this episode indicates that there is an increased public awareness of the reality that AI-based weapons are currently being developed, tested, and used (Kallenborn 2021). In fact, more attention should be paid to the fact AI-based autonomy at different levels is already present in, among others, aerial loitering munitions, ground vehicles and air defence systems (see Boulanin and Verbruggen 2017).

This essay highlights two main ways through which weaponised AI is affecting European security and stability. First, due to the absence of international regulations on the use of weaponised AI, the growing trend of automatisisation in weapons systems is silently changing the ways that humans are involved in the use of force (Bode 2021, see also Bode and Huelss 2018). Current applications of weaponised AI are shifting the understanding of human control involved in critical functions of weapons systems, especially identifying and attacking targets (Sharkey 2016). For example, air defence systems with automatic or semi-automatic features are used by many OSCE participating States. Research has shown that automation in the critical functions of air defence systems “has diminished the capacity of human operators to exercise meaningful human control over specific targeting decisions”, and that “restrictions on the use of air defence systems intended to achieve human control can fail” (Bode and Watts 2021, 63). The use of autonomy is thus gradually changing warfare norms, just like the proliferation of drones has encouraged target killing operations (Senn and Troy 2017; Haas and Fischer 2017). Such developments pose legal, ethical and security risks.

The diminishing role of human control over weapons systems infringes upon several principles of International Humanitarian Law (IHL), which applies to armed conflict (Heyns 2016). The principles of moral responsibility and accountability are challenged by the process of delegating crucial decisions such as selecting and attacking a target from a human operator to an autonomous function which has no moral agency (Asaro 2020, 224). Current AI-based

weapons systems are also not able to satisfy the requirements of distinction between legitimate and illegitimate targets during combat. According to expert evaluations, these types of weapons systems lack the situation awareness necessary to discriminate between combatants and civilians (Sharkey 2019; Suchman 2016, 2020).

Moreover, a diminishing human involvement in the operation of a weapons system with autonomous features has substantial security risks, as it comes with a risk of failure which “can never be entirely eliminated” (Scharre 2016, 25). AI-based weapons systems remain not fully understood by humans, and a declining role of humans exacerbates this knowledge gap. As noted by a United Nations Institute for Disarmament Research (UNIDIR) report, “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” (Holland Michel 2021, 11). These risks include an acceleration of the speed of warfare (Vestner 2021, 8), a destabilizing effect (Garcia 2018; Altmann and Sauer 2017), a competition between great powers (Scharre 2021), the strengthening and “normalization” of practices such as targeted killings (Haas and Fischer 2017), an increase in the asymmetries of warfare (Bode and Huelss 2021, 220), as well as the proliferation of autonomous weapons amongst terrorist organisations and non-state actors (Maas 2019, 286).

The 2020 Nagorno-Karabakh conflict demonstrates the types of risks coming from the uses of weaponised AI. Unmanned aerial vehicles (UAVs) were used by both Azerbaijan and Armenia, and several IHL violations were recorded on both sides (Kozyulin 2021). While these weapons systems are not officially classified as LAWS, their use has been deemed an efficient way of conducting warfare and could even contribute to other States’ pursuit of unmanned vehicles (Cooper 2021). The issue is that there is no way of verifying the level of human control over these weapons systems, which allows for operational practices to continue silently changing norms of war and legitimize the use of weaponised AI. In a possible future armed conflict in Eurasia, there is potential for more IHL violations and further diminishing role of human control over warfare. In other words, “the operational trend towards developing AI-enabled weapons systems continues and is on track to becoming established as ‘the new normal’ in warfare” (Bode and Huelss 2021, 224). While there are no legal norms of a responsible use of weaponised AI, the ways that States use this technology will continue to shape the way that warfare is conducted, while increasing risks to European security and stability.

Second, the discourses surrounding weaponised AI – the ways that OSCE participating States talk about LAWS – also have considerable impact on European security. Both a common definition of LAWS and an agreement on the appropriate level of human control over weapons systems are lacking, which gives way for misinterpretation and increases security risks. Let us examine the discourses of three major players in European security: France, the Russian Federation, and the United Kingdom. Their official positions converge on the importance of retaining human control. The Minister of the French Armed Forces, Florence Parly, 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” (Ministère des Armées 2019). Russia said it “is committed to the need to maintain human control over LAWS, no matter how ‘advanced’ these systems may be” (Russian Federation 2021, 3). The UK Ministry of Defence noted in January 2021, “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” (Ministry of Defence 2021).

Nevertheless, autonomy and the concept of appropriate human control over weapons systems are perceived differently by these States. The Russian side 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 legitimate defence interests of States” (Russian Federation 2021, 3). France has suggested a division between “fully” and “partially” lethal autonomous weapon systems and adopting different types of measures for these two categories. In the French perspective, only the “fully” autonomous weapons should be prohibited (French Republic 2021). 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 than those of other States (Ministry of Defence 2017, 13). A UK House of Lords Select Committee report said this definition is “clearly out of step with the definitions used by most other governments” and also “hamstrings attempts to arrive at an internationally agreed definition” (Select Committee on Artificial Intelligence 2018, 105).

As a common denominator, these States agree on the principle that weapons systems should not function completely autonomously. However, the differences in their perceptions hinder the progress on understanding and preventing the security risks related to the use of weaponised AI. They create misperceptions about the uses of AI, specifically between the leaders in this sphere, who are all carefully watching each other’s technological developments. The NSCAI, for instance, warned the US government that “competitors are actively developing

AI concepts and technologies for military use,” specifically focusing on China and Russia (2021, 22). The discrepancies in definitions and discourses create risks of misunderstanding when, for instance, one participating State is developing a certain weapons system considered to be LAWS by another State. 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 and leads them to similarly pursue more automation just to keep up,” and encourages experts to speak of an ‘AI arms race’ (Scharre 2021).

In response to the risks outlined in this section, several states, scholars and civil society organisations have been arguing for a ban on LAWS. Since 2013, this issue has been discussed within the framework of the UN Convention on Certain Conventional Weapons (CCW). A Group of Governmental Experts (GGE) on emerging technologies in the area of LAWS was established in 2016 to pursue the debate in a more formal setting. However, the discussions are often framed in a futuristic way, focusing on ‘killer robots’ and their potential to operate with full autonomy and without human oversight. As this section has demonstrated, this perspective misses the fact that existing weapons systems with increasingly autonomous features already have the potential to affect security and stability.

At the same time, the impact of weaponised AI for European and international security is not set in stone. Ultimately, AI is not an agent that decides its own path. The trajectory of weaponised AI, as many new technologies in the military sphere and used for conventional weapons, is neither inevitable nor unavoidable. The ‘AI arms race’ scenario may or may not develop in this way, given that much will depend on how states decide to use the AI capabilities that they are pursuing. The next section explores the role and influence of the OSCE in agreeing common principles on the use of weaponised AI, particularly in the form of a political declaration with a commitment to preserving human control over autonomy.

Strengthening Human Control: The Role of the OSCE

Arriving to a common position on weaponised AI regulation will be challenging. The current global and European political atmosphere is one of distrust. There is distrust between two major European security players: Russia and the US. 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” (Walters 2021). There is also distrust among state leaders towards

technologies such as the Internet, AI, 5G and robotics, not least because they can be weaponised and used for threatening activities such as cyberattacks. This environment makes it difficult to find a common understanding and commit to principles on the use of weaponised AI. Nevertheless, in this section I argue that the OSCE possesses some key advantages to become the platform for making a step forward in the global debate.

In 2019, the GGE on LAWS adopted a set of principles to guide the work of the group in the next years, which were endorsed by the CCW High Contracting Parties. These Guiding Principles are broad and have no legally binding force. As pointed out by the Campaign to Stop Killer Robots, the “CCW principles were simply intended to guide the deliberations. They were never supposed to be an end in themselves or intended to provide the structure for or outcome to CCW work on lethal autonomous weapons systems” (2020, 1). Moreover, they do not provide further clarifications on 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” (Principle b). Thus, while 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, which is stalling the progress of the CCW debate (Bolton et al. 2021).

Just like the CCW, the OSCE operates via consensus, which requires seeking a compromise between participating States and can often hamper the decision-making process. However, this institution 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”, described as “comprehensive”, “indivisible”, and “cooperative” (Adler 1998, 119). The former Conference on Security and Cooperation in Europe (CSCE) was a symbol of détente between the US 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 (Rittberger et al. 2012, 42). The Helsinki Final Act negotiations were a cooperative process, with the goal of promoting communication, as well as increasing confidence between States (Sandole 2007, 65). The negotiations resulted in a declaration of common norms and values of the participating States. Following the Cold War, the OSCE was not only able to survive, but also to change its goals and adapt to the rising security challenges of the new world order. Its broad membership and comprehensive approach towards security make it a key, if not the most, legitimate institution for European security (Mosser 2015, 584). At a time when some experts debate whether Russia-US relations have entered a ‘new Cold War’ (Polyakova 2019), the OSCE’s inclusive

approach towards security is the one that is needed to show that tensions can be dealt with in a forum, rather than in the battlefield.

Other international institutions have shown their ambitions in AI regulation. In April 2021, the European Commission presented its legal framework proposal, which, while not touching upon security and defence, could set a path forward towards a regional approach to governing weaponised AI (European Commission 2021).¹ NATO is also due to present an AI strategy and set forward its “principles of responsible use of AI in defence” (NATO Newsroom 2021). The key difference is that these institutions have favored exclusive membership, where prospective countries need to fulfill specific conditions to join. Meanwhile, the OSCE has relatively easy accession rules, as it was initially based on the concept of geopolitical diversity (Pourchot 2011, 183). Crucially, the OSCE includes not only the Euro-Atlantic community, but also other major security actors, notably the Russian Federation. Settling the differences and misunderstandings between Russia and the US 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 shown a disappointment towards Western countries and their making NATO as the main European security organisation (Kropatcheva 2012, 386). By engaging with Russia upon the issue of weaponised AI within the OSCE framework, the US and the EU would contribute to easing the tensions, while also diminishing the chances of misunderstanding and misinterpretation which could lead to severe security risks, as outlined in the first section. The OSCE’s inclusive membership is thus a valuable advantage when it comes to building trust and mitigating the security implications of emerging technologies (Dunay 2006, 25).

What should be the way forward? In the 2019 Luxembourg Declaration on Advancing Sustainable Development to Promote Security, the OSCE Parliamentary Assembly has urged “participating States to support international negotiations to ban lethal autonomous weapons with a view to establishing international, legally binding rules” (2019, 4). A legally binding treaty banning the development of weaponised AI is challenging, given that, unlike nuclear weapons or blinding lasers, AI is not a concrete type of weapon and can also be applied for civilian use (Rosert and Sauer 2020). Some participating States hold the position that a ban will affect the development of useful technology. For instance, the Russian delegation to the CCW has argued that banning weapons systems too hastily could “hinder technological progress”

¹ Moreover, the European Parliament has issued its recommendations for “Guidelines for military and non-military use of Artificial Intelligence” in January 2021. See more: <https://www.europarl.europa.eu/news/en/press-room/20210114IPR95627/guidelines-for-military-and-non-military-use-of-artificial-intelligence>

(2021), while the UK believes that “we should embrace and welcome technological advancements that can support compliance with IHL,” adding, “a legally binding instrument which hampers the legitimate development and use of such technologies would be counterproductive” (Ministry of Defence 2021).

As a realistic starting point, the OSCE’s Confidence and Security Building Measures (CBMs) could provide a framework to exchange information and observations on the use of weaponised AI, in order to facilitate communication and dialogue (Egel 2021). The OSCE already has CBMs for Information Communication Technologies (ICTs), which, like weaponised AI, create “an area with much room for speculation, doubt, and ambiguity”, and “increase the potential for tensions between States” (OSCE website). There is also potential to go further than exchanging information informally within the CBMs framework. The next step should be, based on the recommendations of the International Panel on the Regulation of Autonomous Weapons (iPRAW), to “focus on the obligation to maintain human control over the use of force” which would “apply to all conventional weapons” (2021, 6). Taking this path will avoid the debate on defining LAWS, which has been hindering the progress of the CCW discussions. Based on the GGE Guiding Principles, the commitment to human control should be enshrined into a normative framework, for example a political declaration or a manual of best practices. Any document with a soft law standing, or a politically binding status, would already be a step forward. Such a political declaration could be part of the Vienna Document, or the result of a new Working Group established at the OSCE.

Importantly, an OSCE political declaration or guiding code on weaponised AI would not go against the efforts at the CCW but would complement and build upon them. Shifting the discussion towards the current impacts of weaponised AI, rather than the potential future impact of ‘killer robots’ would be a progressive step to mitigate the risks coming from this emerging technology. An agreement at the OSCE would also be a preliminary step towards building consensus at the UN. It would demonstrate that finding consensus, especially in an atmosphere of political distrust, is possible. This is a relevant and crucial step for European and international security. While debates at the CCW continue, the operational trend towards further autonomy in the armed forces of OSCE participating States continues. As noted in the previous section, 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 committing to a common definition of human control is a realistic achievement.

In sum, a political declaration should contain a commitment to keeping human control over existent AI-driven weapons systems. Agreeing to enshrine such a commitment in a document with a soft law nature would be a step forward not only towards addressing regional security threats, but also towards an international framework on weaponised AI. As highlighted in this section, the history and membership of the OSCE make it the organisation to build trust and take a step forward on weaponised AI, at a moment when global discussion at the UN is stalling and when operational trends continue to increase autonomy.

Conclusion

This essay has argued that current practices related to the use of weaponised AI already impact European stability and security. Operational trends are diminishing the level of human control over weapons with increasingly autonomous features in their critical functions, which poses significant legal, ethical and security risks. Moreover, the lack of definition of LAWS and a common conception of an appropriate level of human control among participating States creates uncertainty and potential for misinterpretation. At the same time, the trajectory of AI is not set to be an ‘arms race’, as “arms races are not inevitable, but can be managed, channeled or even stopped” (Maas 2019, 303). States can intervene in a variety of political ways to address the impacts of existing weaponised AI. Finding a common agreement is a challenging, but not impossible task. In this essay, I have argued that the OSCE is a promising platform to build upon the stalled discussions at the CCW. This institution has a history of acting as a bridge between Eastern and Western perspectives of European security. It is an inclusive organisation which brings together not only the Euro-Atlantic Community, but also the Russian Federation, one of the key developers of weaponised AI and players in European security. By debating the issue of weaponised AI at the OSCE and agreeing on a political declaration with commitment to human control, participating States will address the risks of autonomy in weapons systems, as well demonstrate as the relevance of the OSCE in tackling the impact of new technologies and their use in conventional weapons.

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