



AUTONOMOUS WEAPONS SYSTEMS AND THE RULE OF SURRENDER – CRITICAL ANALYSIS OF POSSIBLE LEGAL CHALLENGES

1. Introduction

Almost all areas of life in modern society are inseparably connected with the development of technology. This is – and was – true within the military field as ‘war and the technological development have been indelibly linked for centuries’.¹ Thus, the battlefield, besides being a place of fighting, very often serves as a ground where new military inventions are checked in practice. Autonomous weapon systems represent one example of such development being introduced in relatively recent times. Their deployment on the battlefield invokes not only complex strategic and operational questions² or public debate involving both huge criticism and support for this kind of weapon, but also serious legal and ethical dilemmas. The area of law closest to such problems is obviously the law governing the conduct of war – i.e. international humanitarian law. The deployment of such weapons is challenging for the rules of humanitarian law, which pose many challenges to autonomous weapons systems. Nevertheless, despite the existence of a wide range of questions which could be put forward, the one which seems to be most frequently asked by legal scholars and which is certainly an important one – if not the most important – is whether such autonomous systems are able to comply with the rules of the humanitarian law? This issue is currently growing in significance, as ‘killer robots’ are increasingly gaining the ability to operate

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¹ G.S. Corn, *Autonomous weapons systems: managing the inevitability of ‘taking the man out of the loop’* [in:] *Autonomous Weapons Systems: Law, Ethics, Policy*, ed. Nehal Bhuta [et al.], Cambridge 2017, p. 209.

² K. Anderson, M. Waxman, *Law and Ethics for Autonomous Weapon Systems: Why a Ban Won’t Work and How the Laws of War Can*, p. 2, http://media.hoover.org/sites/default/files/documents/Anderson-Waxman_LawAndEthics_r2_FINAL.pdf, 15.05.2018.

in the absence of human control.³ Notwithstanding the fact that a considerable number of scholars have been debating and analysing this crucial problem, opinions remain divided on whether autonomous weapons satisfy the principles of the law of war and which principles they satisfy.

After reading many articles and essays on the legal and ethical perspectives regarding compliance with the principles of international humanitarian law, and analysing many contradictory opinions, this author submits that it is virtually impossible to assess whether or not ‘killer robots’ comply with humanitarian law in general. Therefore, this article will not try to reinforce or even evaluate the possibility of introducing a ban on the weapons discussed herein. Rather, it attempts to objectively assess the problems and challenges which may arise in a situation when autonomous weapons systems would be confronted with a particular area of humanitarian law. An analysis of the literature leads to the observation that, although numerous articles and books focus on scrutinising the most important rules of international humanitarian law, scarce consideration is given to other parts of this area of law. The law of surrender might incite much discussion, so an answer needs to be found to the question about how the rule of surrender might be affected by the deployment of autonomous weapons and which challenges autonomous weapons may pose to the rule of surrender. Additionally, this article seeks to find an answer to the question of how the rule of surrender and the principle of distinction (which are closely interconnected) could affect the development of autonomous weapons systems. In this manner, the essay analyses the mutual influence which the laws of surrender and autonomous weapons systems exert upon each other. This is done via a study of primary sources such as legal documents or advisory opinions of the International Court of Justice and leading academic literature on both subjects.

³ V. Sehrawat, *Autonomous weapon system: Law of armed conflict (LOAC) and other legal challenges*, CLSR 2017, vol. 33, p. 38.

2. Autonomous Weapons Systems

For the purposes of this essay, it is crucial to have at least some idea as to what autonomous weapons systems are, as this may not be so obvious. There is no unambiguous definition of this term, despite the fact that it is widely accepted as a standard one.⁴ As proposed by the International Committee of the Red Cross ‘an autonomous weapon system is one that has autonomy in its ‘critical functions’, meaning a weapon that can select (i.e. search for or detect, identify, track) and attack (i.e. intercept, use force against, neutralize, damage or destroy) targets without human intervention’.⁵ Perhaps the easiest and most straightforward way to describe such weapons is to say that they do not include the ‘direct human involvement’ in decision-making⁶ as its operation is based on a computer program. Once activated, such systems are able to define the target, trace and attack.⁷ Thus, any system able to do this without direct human supervision or involvement - in a situation with very limited or no substantial human control⁸ – in the post-activation process can be considered to be autonomous.⁹

The major technological feature of autonomous weapons is their artificial intelligence – the systems under consideration are cautiously pre-programmed, which results in them possessing the aforementioned capacity to undertake decisions or to learn and adapt based on their previous experiences.¹⁰ The fact that those systems have the capability to learn and adapt their functioning is an outcome of the automatic decision process characteristic for artificial intelligence. Automatic processing

⁴ Schrawat, [2017], p. 40.

⁵ *Autonomous weapon systems: Is it morally acceptable for a machine to make life and death decisions?*, <https://www.icrc.org/en/document/lethal-autonomous-weapons-systems-LAWS>, 15.05.2018.

⁶ P. Asaro, *On banning autonomous weapon systems: human rights, automation, and the dehumanization of lethal decision-making*, IRRRC 2012, vol. 94(886), p. 690.

⁷ N. Sharkey, *Staying in the loop: human supervisory control of weapons* [in:] ed. Bhuta [et al.] [2017], p. 23.

⁸ M. Ekelhof, M. Struyk, *Deadly Decisions. 8 objections to killer robots*, Utrecht 2014, p. 4.

⁹ Asaro, [2012], p. 690.

¹⁰ Asaro, [2012], p. 692.

which simply is based on automatically hinted fast responses¹¹ ‘can be trained through repetition and practice on routine tasks’.¹² Moreover, autonomous weapons systems also consist of sophisticated sensors to help identify a target and to coordinate the weapon’s own position and orientation during warfare.¹³ The weapons under consideration are, to some extent, also able to communicate with humans and with each other. Schrawat and others have noted that this feature represents an immense challenge in the development of such technology.¹⁴

The fact that it is possible to explain quite succinctly what this type of weapon actually is does not make it easy or non-problematic to qualify a particular system as autonomous. The issue is more complex than may seem at first glance. This complexity can be also seen in uncertainty regarding labelling. Confusion of this kind has led to the adoption of many names, including for example: ‘drones’, ‘robots’, ‘autonomous weapon systems’, ‘killer robots’, ‘lethal autonomous robotics’, ‘lethal and non-lethal’ semi- and fully autonomous weapons systems, ‘supervised autonomy’¹⁵, ‘robotic weapons’ or ‘unmanned systems’.¹⁶ Difficulties and a lack of focus in naming, which also complicates appropriate categorisation, are predominantly caused by the relatively scarce information available on the functioning of the objects under consideration. As inventions used by the military, data regarding their functioning is most often confidential and not fully available for the public. Therefore, one of the biggest problems is that ‘there is no transparency in the operation of such computerized weapons’.¹⁷ As Sarah Knuckey from Columbia Law School concluded: ‘secrecy has often been a feature of weapons development

¹¹ Sharkey, [2017], p. 30.

¹² Sharkey, [2017], p. 32.

¹³ Schrawat, [2017], p. 41.

¹⁴ Schrawat, [2017], p. 42.

¹⁵ *Framing Discussions on the Weaponization of Increasingly Autonomous Technologies*, Geneva 2014, p. 3, <http://www.unidir.org/files/publications/pdfs/framing-discussions-on-the-weaponization-of-increasingly-autonomous-technologies-en-606.pdf>, 16.05.2018.

¹⁶ V.C. Müller, *Autonomous Killer Robots Are Probably Good News*, p. 3, <https://philpapers.org/archive/MLLAKR.pdf>, 16.05.2018.

¹⁷ Sharkey, [2017], p. 26.

and the use of lethal force by states, and past practice suggests that many of the kinds of facts actually necessary for any external observer to make reasonable legal conclusions about AWS may in practice be kept secret on ‘national security’ grounds.¹⁸ The problem with transparency can, to some extent, be overcome by reviewing weapons in accordance with Article 36 of Additional Protocol I to the Geneva Conventions. This is a mechanism which requires each State party to the Additional Protocol to assess whether the deployment of new weapons, means or methods of warfare is in compliance with its international legal obligations.¹⁹ However, the absence of clearly established standards in this field, combined with an unwillingness or inability to share information on this topic, is no help in deciding on issues that extend beyond the relatively marginal issue of labelling and into the further assessment and research on numerous significant problems discussed in the context of autonomous weapons systems.²⁰

Another issue – which, to a major extent, is linked to the problem of labelling described above – is the spectrum of autonomy. At one extreme, we have remotely controlled objects where a human controls the action of the weapon from a distance whereas, at the other extreme, the weapon is fully autonomous and characterized by cognitive thinking and capacity to exercise full control over its decisions. Nowadays, most designs used in the military are ‘clustered at the lower end of the spectrum’ and referred to as remote, automatic or automated weapons. There exists, however, the will of some states to develop a weapon which would have far greater autonomy and probably even be fully autonomous, so that it operates without a human being in the loop at all.²¹ A problem arising here is connected to labelling and to the issue of how to identify when a weapons crosses the line beyond which it may be defined as auto-

¹⁸ S. Knuckey, *Autonomous weapons systems and transparency: towards an international dialogue* [in:] ed. Bhuta [et al.] [2017], p. 175.

¹⁹ K. Lawand [et al.], *A Guide to the Legal Review of the New Weapons, Means and Methods of Warfare*, Geneva 2006, p. 1, https://www.icrc.org/eng/assets/files/other/icrc_002_0902.pdf, 16.05.2018.

²⁰ V. Boulanin, *Implementing Article 36 Weapon Reviews in the Light of Increasing Autonomy in Weapon Systems*, SIPRIIPS 2015, vol. 2015/1, p. 2.

²¹ *Framing Discussions on the Weaponization of Increasingly Autonomous Technologies*, [2014], pp. 2–3.

mous within the meaning of the aforementioned spectrum. This is even more problematic knowing that no comprehensive, standard definition of autonomous weapons really exists. Various assessments are provided by different states and organizations, such as for example the International Committee of the Red Cross. Nevertheless, no single definition is widely accepted or shared by all international actors.²²

3. The Rule of Surrender

For the purposes of this article, it is crucial to include an explanation of the rule of surrender. There is no doubt that, under the international humanitarian law, it is unlawful to directly attack someone who has surrendered.²³ In the *Commentary to Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949* this rule ‘in practice [...] is one of the most important rules of the Protocol’.²⁴ The rule is derived from the basic principles on methods and means of warfare laid down in Article 35 of the Additional Protocol I to the Geneva Conventions²⁵ – i.e. the prohibition on causing unnecessary suffering – as, without an assurance that an enemy who surrendered will not be targeted, there would be no motivation for those taking part in hostilities to submit to the authority of the opponents, so fights would be prolonged to the death and *ipso facto* prolong conflicts.²⁶

This obligation is imposed in both of the Additional Protocols to the 1949 Geneva Conventions – on both international conflicts and non-international conflicts. The differentiation for the two types of conflict within those two Additional Protocols is not without any meaning. Let us commence with the legal rules from Protocol I. The doctrine on the rule of surrender is derived from Article 40 which states that ‘it is prohibited

²² *Framing Discussions on the Weaponization of Increasingly Autonomous Technologies*, [2014], p. 3; Boulanin, [2015], p. 9.

²³ R. Buchan, *The Rule of Surrender in International Humanitarian Law*, IILR 2018, vol. 51, p. 3.

²⁴ *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949*, ed. Y. Sandoz, C. Swinarski, B. Zimmermann, Geneva 1987, p. 480.

²⁵ Sandoz, Swinarski, Zimmermann, [1987], p. 480.

²⁶ Buchan, [2018], p. 3.

to order that there shall be no survivors' and in Article 41 whose first paragraph states that a person being '*hors de combat* [out of the combat] shall not be made the object of attack'. The following paragraph explains when a person is to be deemed to be '*hors de combat*'. In the context of surrender, it is a person who 'clearly expresses the intention to surrender'.²⁷ As regards non-international conflict, the rules governing surrender derive from Additional Protocol (II), which is a bit less straightforward. Article 4 of the Protocol contains 'fundamental guarantees' which include the obligation to treat humanely and with respect 'all persons who do not take a direct part or who have ceased to take part in hostilities, whether or not their liberty has been restricted'. It repeats the wording of Additional Protocol I that 'it is prohibited to order that there shall be no survivors'.²⁸ As Russel Buchan underlines in his article, a proper interpretation of this provision is that the treaty imposes upon the parties an obligation 'to accept valid offers of surrender'.²⁹ What is more, the International Committee of the Red Cross' Study on Customary International Humanitarian Law qualifies the rule contained in both Article 40 of Protocol I and Article 4 of Protocol II as the rule is based on common Article 3 of the Geneva Conventions, which prohibits 'violence to life and person, in particular murder of all kinds' against persons who are *hors de combat*. Despite the criticism of the aforementioned ICRC Study, that rule is rather widely accepted.

The rule of surrender is clearly inapplicable to civilians because any person qualified as a civilian cannot be targeted.³⁰ There are recognized situations where this is not the case, such as when a civilian directly participates in hostilities, but it is beyond the scope of this article to elaborate on this issue, which is more complicated than may seem at

²⁷ Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts, 1125 UNTS 3, [1977] – hereinafter referred to as "Protocol I".

²⁸ Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts, 1125 UNTS 609, [1977], art. 4 – hereinafter referred to as "Protocol II".

²⁹ Buchan, [2018], p. 11.

³⁰ Protocol I, art. 51; Protocol II, art. 13.

first glance. Thus, notwithstanding its simplicity, the rule of surrender in its very direct form should not be applied to civilians. Possessing the immunity from direct targeting, ‘civilians do not have the legal capacity to surrender’.³¹ This is a matter of one of the most fundamental principles in international humanitarian law – the principle of distinction. This fundamental rule, based on state practice which forms a norm of customary law, is applied both in international and non-international conflicts.³² It imposes on the parties to the conflict (and due to its customary law character even on those states which are not a party to the Additional Protocols to the Geneva Conventions where this principle is codified³³) the duty to distinguish between combatants and civilians at all times. It provides that attack cannot be directed against civilians but only against combatants. The meaning of the term ‘combatant’ in this context should be understood in its generic sense as applying to any person who is not under the same protection as that granted to civilians. Moreover, as the ICRC Study on the Norms of Customary International Humanitarian Law stresses ‘this rule has to be read in conjunction with the prohibition to attack persons recognised to be *hors de combat*’.³⁴ This explains the significance of mentioning this in the considerations within this essay. It is worth noting that the principle of distinction also encompasses the obligation to distinguish by analogy between civilian objects and military objects.³⁵

4. Possible challenges

Having explained both autonomous weapons systems and the rule of surrender, this article now seeks to provide answers to the research questions mentioned in the introduction. Which legal challenges can

³¹ Buchan, [2018], p. 14.

³² *Customary International Humanitarian Law, Vol I: Rules*, ed. J.M. Henckaerts, L. Doswald-Beck, Cambridge 2009, p. 3.

³³ Protocol I, art. 48, art. 51; Protocol II, art. 13(2).

³⁴ Henckaerts, Doswald-Beck, [2009], p. 3.

³⁵ Sandoz, Swinarski, Zimmermann, [1987], p. 480; Protocol I, art. 48, art. 52(2); Protocol II, art. 13(1).

autonomous weapons systems pose to the rule of surrender? How can both the AWSs and the laws on surrender mutually influence each other?

The first problem to be discussed is based in the context of the above-mentioned principle of distinction. As noted in the Advisory Opinion of the International Court of Justice on the Legality on the Threat or Use of the Nuclear Weapons, the ‘cardinal’ principle of international humanitarian law is the protection of civilian populations, so States must never make civilians the target of an attack. This is crucial when considering the rule of surrender because, as noted above, this rule does not apply to civilians given the fact that they cannot be directly targeted. This gives rise to the question whether autonomous weapons systems are/would be compliant with this requirement. Would such systems be able to distinguish a combatant from a civilian? Sehrawat’s article expresses the opinion that ‘Humans sometimes cannot make the distinction between a soldier and a civilian, it will be challenging for the machines to exceed the capability of their makers.’³⁶

To complicate things further, the legal capacity to surrender is possessed only by those persons who directly participate in hostilities and who, being someone who constitutes a threat to the enemy, can be directly targeted. This category clearly includes combatants. However, civilians do sometimes directly participate in hostilities and such participation nullifies the protection that would otherwise be granted to civilians. Even though this may sound reasonable and one may imagine that it is easy to recognize when civilians directly participate in hostilities, this is often not the case.³⁷ The most problematic issue in this regard is when a civilian repeatedly, but not constantly, participates directly in hostilities. Does the protection granted to civilians recommence during lulls in such participation? As Russell Buchan summarizes in his article, the conventional interpretation states that such immunity is retained ‘even during intermissions in direct participation’.³⁸ This author also emphasises that

³⁶ Sehrawat, [2017], p. 45.

³⁷ N. Melzer, *Interpretive Guidance on the Notion of Direct Participation in Hostilities under International Humanitarian Law*, Geneva 2009, p. 12, 41–42.

³⁸ Buchan, [2018], p. 14.

‘certain states maintain the view that where civilians repeatedly participate directly in hostilities to the extent that their future participation is likely and predictable, they remain a threat to the military security of the opposing party and can be directly targeted even notwithstanding the lulls in participation’.³⁹ Thus, as regards autonomous weapons, it is crucial to be able to distinguish between civilians, combatants and civilians who directly participate in hostilities, as States must ‘never use weapons that are incapable of distinguishing between civilian and military targets’.⁴⁰ Moreover, such machines, when fully autonomous would face the problem of ambiguities in interpreting any lulls in participation.

Another challenge in the context of autonomous weapons systems and the rule of surrender regards the effectiveness of an act of surrender. Before a surrender is legally valid, a ‘positive act’ of the surrendering person is necessary.⁴¹ Such ‘positive act’ must express in an ‘absolutely’ clear manner the will to surrender, to no longer participate in hostilities.⁴² The nature of the ‘positive act’ is to some extent explained in Article 23(c) of Hague Convention IV on the laws and customs of war on land and in the Rome Statute of the International Criminal Court. The first article of Hague Convention IV renders it forbidden ‘to kill or wound an enemy who, having laid down his arms, or having no longer means of defence, has surrendered at discretion’. In almost identical words, such actions are also prohibited and qualified as a war crime by Article 8(2)(b)(vi) of the second legal act mentioned. Advanced programming of artificial intelligence would thus need to understand that laying down arms constitutes a positive act which indicates a surrender. Considering the current development of technology, such as the ability of smart phones to remember and differentiate between different faces, the capacity for an autonomous system to suspend an attack after seeing someone lay down their weapon does not seem to represent an insurmountable challenge.

³⁹ Buchan, [2018], p. 14.

⁴⁰ Advisory Opinion of the ICJ of 8 July 1996, *Legality of the Threat or Use of Nuclear Weapons*, ICJ Reports 1996, p. 226, para. 78.

⁴¹ Buchan, [2018], p. 12; H. McCoubrey, N.D. White, *International Humanitarian Law: The Regulation of Armed Conflict*, Dartmouth 1992, p. 227.

⁴² Sandoz, Swinarski, Zimmermann, [1987], p. 487.

However, it could be more difficult for an autonomous machine to accept an offer of surrender. It must be remembered that international humanitarian law obliges parties to a conflict ‘to accept valid offers of surrender’.⁴³ Ambiguity exists when it comes to what constitutes an effective offer. No treaty contains conditions or instructions on how to interpret what is a legally valid surrender. Some guidance is provided, however, in the Commentary on the Additional Protocols of 1977 and in the ICRC Study on customary IHL. Both instruments include, amongst the various ways of effectively expressing an intent to surrender, mention the laying down of weapons, raising hands, ceasing fire, waving (displaying) a white flag, emerging ‘from the shelter with hands raised’ or even in a situation when a soldier is surprised ‘a combatant can raise his arms to indicate that he is surrendering, even though he may still be carrying weapons’⁴⁴ which should also amount to a valid surrender offer. Analyzing the following information from the perspective of AWSs, it is clear that these systems would need to be capable of recognizing such ‘positive acts’. Taking into account even the current technological developments, as noted in the previous paragraph, it does not seem impossible for a machine to accept an intended offer of surrender.

Significant problems could arise regarding the issue of the white flag. As regards an autonomous weapon’s ability to merely recognise such a flag, this should not be problematic, but the exact function of the white flag is not so unequivocal. Its status in international humanitarian law is not fully clear, given some contradictory views in state practice and custom which, as noted in Article 38 of the ICJ Statute, represents a crucial source of international law. The ambiguity on interpreting the use of a white flag was highlighted in the aforementioned article written by Russell Buchan. This author analysed military manuals, which he considers to be important sources of state practice regarding IHL⁴⁵, and explained that the use of a white flag is not treated by all states as something which indicates a desire to surrender. Some states’ military manuals explicitly

⁴³ Buchan, [2018], p. 19.

⁴⁴ Sandoz, Swinarski, Zimmermann, [1987], p. 486–487; Henckaerts, Doswald-Beck, [2009], p. 168.

⁴⁵ Buchan, [2018], p. 12.

rejected ‘the contention that the waving of a white flag is constitutive of surrender’ and consider it to indicate nothing more than an intention to negotiate. As noted in the United Kingdom’s Manual on the Law of Armed Conflict ‘everything depends on the circumstances and the conditions of the particular case’.⁴⁶ This inconsistency in state practice may, to some extent, be an obstacle in developing autonomous weapons systems. If the second interpretation had been adopted then possibly the deployment of fully autonomous systems on the battlefield would be questionable, as doubts may arise regarding both the likelihood of negotiations between a machine and human soldiers and the ethical implications of such a situation. In this author’s opinion, in such a situation human supervision would be indispensable, as communications would need to be exchanged between commanders, more importantly human commanders. A possible explanation for this point of view could be the existence of a ‘responsibility gap’⁴⁷ and the absence of any clear norms regarding who should be held responsible for the actions of AWSs. Treaty law creates the concept of command responsibility⁴⁸ and thus omits the problem of the ‘responsibility gap’.

It is also worth mentioning that a retreat of armed forces is not widely recognized as a positive act demonstrating an intent to surrender.⁴⁹ This fact may also, to some degree, represent a challenge for the development and deployment of autonomous weapons.

Another important issue is how the technological features of AWSs affect the rule of surrender. Would it be possible for robots to fully comply with the laws on surrender? The biggest challenge seems to be the presence of automatic reasoning, as succinctly explained above. Given such reasoning, the problem may be that an AWS immediately ‘jumps to conclusions’, leaving no place for doubt or further consideration.

⁴⁶ Buchan, [2018], p. 20–21; *Joint Service Manual of the Law of Armed Conflict*, Swindon 2004, para. 10.5, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/27874/JSP3832004Edition.pdf, 16.05.2018.

⁴⁷ N. Bhuta, S. Beck, R. Geiß, *Present futures: concluding reflections and open questions on autonomous weapons systems* [in:] ed. Bhuta [et al.] [2017], p. 358.

⁴⁸ Protocol I, art. 86(2).

⁴⁹ Buchan, [2018], p. 22.

A characteristic trait of this is bias, known as automation bias, in the sense that systems uncritically accept suggestions. It also focuses exclusively only evidence which is present and known, to the exclusion of any evidence that may be absent. All such disadvantages might be challenging in the context of the discussed rule. As shown above, many ambiguities exist in state practice and such ambiguities are incapable of being applied by autonomous systems, regardless of their capacity to learn.

5. Conclusion

Weapons which may be called autonomous are currently deployed on the battlefield. Moreover, a considerable number of scholars argue that it is highly likely that fully autonomous weapons systems will be developed in the future.⁵⁰ Even though it is impossible to predict the future, many deliberations and discussions currently exist regarding problems that arise from the current situation with AWSs and their potential development. This article sought to define some such challenges regarding autonomous weapons and the rule of surrender. Obviously, it was not possible to delve into all possible difficulties, many of which will most probably arise from case to case. Moreover, as noted above, the lack of transparency in this area represents an obstacle to a deeper understanding of the topic.

In summary, neither this article nor any other is capable of answering all of the questions surrounding the given discussion topic. On the contrary, it has perhaps created new questions or lines of inquiry. However, a conclusion which must be drawn is that the rule of surrender should definitely represent one of the lenses through which the future development of the AWSs should be assessed, together with the other rules of international humanitarian law. Thus, it is incredibly important to create a legal framework for the functioning of autonomous weapons systems. This has already been propounded by some scholars and organizations⁵¹ and it seems to be the only possible manner in which the aforementioned

⁵⁰ Bhuta, Beck, Geiß, [2017], p. 347–348; Corn, [2017], p. 242; *Framing Discussions on the Weaponization of Increasingly Autonomous Technologies*, [2014], p. 10.

⁵¹ Bhuta, Beck, Geiß, [2017], p. 308; S. Casey-Maslen, *Pandora's Box?: Drone Strikes Under Jus Ad Bellum, Jus In Bello, and International Human Rights Law*, IRRRC 2012, vol. 94, p. 625; Schrawat, [2017],

obstacle - the lack of transparency – can be overcome, as the current legal framework seems, to this author, to be incapable of fully regulating all of the possible, yet intangible, challenges which may arise from deploying autonomous weapons.

Summary

This article considers the interrelationship between autonomous weapons systems and the rule of surrender. The introduction briefly outlines the aims, which are followed by an explanation of what autonomous weapons systems are and which problems exist regarding their definition, qualification and labelling. The third part of this paper includes a concise account of the rule of surrender – its legal basis, meaning and ethical motives. This necessary theoretical framework facilitates a discussion of the possible legal challenges which autonomous weapons systems may pose to the rule of surrender. It also triggers a discussion of the mutual influence which AWSs and this particular rule of international humanitarian law exert over each other. Moreover, current and potential problems regarding these two matters (such as a lack of transparency in the development of autonomous weapons) are identified and elaborated.

Keywords: autonomous weapons, autonomous weapons systems, rule of surrender, international humanitarian law, law of armed conflicts

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p. 55; *Framing Discussions on the Weaponization of Increasingly Autonomous Technologies*, [2014], p. 5; Boulanin, [2015], pp. 1–2.