

International Responsibility of States and Artificial Intelligence



-Master Thesis-

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List of Abbreviations

AI	Artificial Intelligence
AWS	Autonomous Weapon System
ACHR	American Convention on Human Rights
CCW	Certain Conventional Weapons
DARIO	Draft Articles on the Responsibility of International Organizations
ECHR	European Convention on Human Rights
GA	General Assembly
IO	International Organization
ICJ	International Court of Justice
ICRC	International Committee of the Red Cross
ICCPR	International Covenant on Civil and Political Rights
IHL	International Humanitarian Law
IHRL	International Human Rights Law
ILC	International Law Commission
ILC-Articles	Draft articles on Responsibility of States for Internationally Wrongful Acts
NATO	North Atlantic Treaty Organization
Protocol I	Additional Protocol I to the Geneva Conventions

Protocol II	Additional Protocol II to the Geneva Conventions
RMA	Revolution in Military Affairs
SC	Security Council
UN	United Nations
US	United States of America
UK	United Kingdom
UAV	Unmanned Aerial Vehicle
UNC	Charter of the United Nations
VCLT	Vienna Convention on the Law of Treaties
WTO	World Trade Organization

Abstract

The present paper will focus on the legal aspects of State responsibility, as a consequence of internationally wrongful acts resulting from the military use of *artificial intelligence* (AI). The first part will serve as a contextualization of the current stage of AI and its conceivable utility within the future of warfare. In this section, we will draw special attention to the development of *autonomous weapon systems* (AWS) and its potential impact in existing legal frameworks in matters of the *responsibility of States*. For this purpose, the following chapters will serve as a qualitative analysis through which the theory of the responsibility of States will be firstly synthesized, to then continue reflecting on its possible application in a case study about AWS. The analysis will focus on the ‘General Rules on State Responsibility for Internationally Wrongful Acts’ as laid down in the *Draft Articles on Responsibility of States for Internationally Wrongful Acts* adopted by the International Law Commission, by examining the criteria for the emergence of an internationally wrongful act of the State, that is, first the breach of an international obligation of the State and then the attribution of such behaviour to said State. The criteria will be addressed in this very order, contrary to the sequencing of the Draft Articles, due to the particularly complex interaction between the rules of attribution and AWS. However, it will not be the aim of this paper, to carry out an exhaustive study about the multiple sources of international obligations of States nor the full content of the Draft Articles. On the other hand, it will also not be the objective, to delve into the discussions regarding the qualification of individual criminal responsibility. The analysis will ultimately stick to three elected substantive areas of international law, i.e., the *ius ad bellum*, the *ius in bello* and International Human Rights Law (IHRL), which may have a direct bearing on the legality of the use of AWS.

Hence, this thesis will primarily address the question about the applicability of international law, more concretely the General Rules on State Responsibility, to internationally wrongful acts derived from the State use of AWS.

Keywords

AI– AWS – IHL – ius ad bellum – IHRL – international responsibility

A. Introduction

Throughout history, technological advances have provided a crucial tactical military advantage to those who have developed them: the invention of gunpowder in the Middle Ages, the steam engine in the 16th century, the automobile and electric power in the 20th century, the airplane, the rocket and, the splitting of the atom between 1900 and 1945¹. Up until relatively recently, military force was only effective under the centralized control of a State; in the modern era, however, with the advent of decentralized telecommunications technologies such as the Internet, that is no longer the case; these new technologies, when harnessed to their full potential, transcend the limits of traditional geographical and political borders. These technologies have given rise to new paradigms of warfare, which are constantly being updated, revised, and expanded as new advances are made. Experts have coined a general term to describe this tendency within modern warfare; namely, the “Revolution in Military Affairs” (RMA)². The rise of RMA has led to new challenges within both the military and national security sectors; the result is a clear divide between developed countries, in possession of more technologically sophisticated weapon systems, and developing countries, which have generally been unable to keep pace, e.g. the U.S. forces in Afghanistan against the Taliban in 2001³. This exponential acceleration of technological systems fosters the emergence of new systematic risks and transcendental transformations with the potential to compromise the resilience of our current scientific and legal paradigms, assuming these are not developed and adapted accordingly.

Today, a new military technology announces the emergence of a new arms race. As the United States (US), the United Kingdom (UK), Russia, China, South Korea, and Israel⁴ begin to study the potential of fully autonomous military systems, a tendency can be observed, in which the international community is increasingly showing an interest in exploring *artificial intelligence* (AI) for national security

¹BUCHANAN, R. A., ‘History of Technology’. In: *Encyclopaedia Britannica* [online], 2019.

²SINGER, W., *Corporate Warriors: The Rise of the Privatized Military Industry*, Ithaca, Cornell University, 2003, pp. 49-63.

³FRENCH, P. [electronic source]: *War Machines of Afghanistan* [analysis]: Army Technology, 2009-, [accessed: 24.11.19]. Available at: <https://www.army-technology.com/features/feature50591/>.

⁴GARCÍA, ECATERINA, The Artificial Intelligence Race: U.S., China and Russia. In: *Modern Diplomacy* [online]: Science and Technology, 2018.

purposes. This race for AI dominance embodies what some scholars already call “the third revolution of war”⁶. AI impregnates our daily lives in numerous subtle ways, performing tasks that originally could only be performed by humans with highly specialised knowledge, expensive training, or a government-issued license. Autonomous machines can execute complex financial operations, perform document review, drive cars, enable less invasive surgical operations and identify potential terrorist group members by using facial recognition software; hence bringing many potential benefits for society⁷.

Before continuing with the present thesis, a definition for AI as a premise is needed. AI pioneer John McCarthy stated that there is no “solid definition of intelligence that doesn’t depend on relating it to human intelligence”⁸, therefore every attempt at defining AI has focused on interconnected human characteristics such as self-awareness, language use, and the ability to learn, adapt and reason. A purely goal-oriented approach would be a metaphysical question rather than a legal one, whereas a definition centred on rationality, poses the risk of being too broad for the purposes of this paper. AI programs that act rationally may not pose a public risk while others that do not act in said manner may pose serious public risks - if the lack of rationality hinders the legislator’s ability to predict the program’s actions. Therefore, this paper will stick to the definition coined by Mathew U. Scherer, which is based on a legal perspective: “artificial intelligence refers to machines that are capable of performing tasks that, if performed by a human, would be said to require intelligence”⁹. Regarding the current state of technology development, it can be said that the current phase is dominated by what is known as *narrow AI*, i.e. reduced AI designed to perform a set of specific tasks. However, the goal of some State-led military-industrial projects, such as

⁵ RODRIGUEZ ALVAREZ, J., in: MARTINEZ QUIRANTE, R. and RODRIGUEZ ALVAREZ, J. (eds.), *Inteligencia artificial y armas letales autónomas*: un nuevo reto para Naciones Unidas, Gijón, Ediciones Trea, 2018, p. 18.

⁶ Id., p. 9.

⁷ RoboLaw [online]: *Regulating Emerging Robotic Technologies in Europe: Robotics facing Law and Ethics* [collaborative project]: FP7-SiS-Challenge 1-3: Regulating emerging scientific and technological developments, 2014-, [accessed: 25.11.19]. Available at: www.robotlaw.eu.

⁸ McCARTHEY, J., ‘What is Artificial Intelligence?’. In: *Formal Reasoning Group* [online]. [United States] : Computer Science Department, Stanford University, 2007, November-12-2007.

⁹ SCHERER, M. U., “Regulating Artificial Intelligence Systems: Risks, Challenges, Competences, and Strategies”, *Harvard Journal of Law & Technology*, Vol. 29, 2016, num.2, pp. 359-362.

the ‘US Defense Advanced Research Project Agency’ (DARPA)¹⁰ is to reach the so-called *artificial general intelligence*¹¹. The latter would be distinguished by its ability to perform a set of cognitive tasks matching or even surpassing humans (*superintelligence*) without significant human intervention (*human-out-of-the-loop*)¹². As can already be seen today in the example of search engines and spam filters among others, technological systems solve problems and learn by using different algorithms in a process known as *deep learning*¹³. This consists of a statistical process that begins with a variety of data, provided by the manufacturer, and attempts to foster a derivation of specific rules or patterns, from the machine’s side, that strive to explain the provided data and try to predict future data. Hence, the machine could reach certain associations on the basis of such initially introduced data that serves as its core to operate within given real life situations.

The controversy begins with AI as a national security defence mechanism, which has "license to kill"¹⁴. This may apply to the latest advances in war technology under the term of *autonomous weapon systems* (AWS) and its use in e.g. DARPA’s *Collaborative Operations in Denied Environments* (CODE)¹⁵ or aiming *Target Recognition and Adaption in Contested Environments* (TRACE)¹⁶ with “minimal human commands”. There is no internationally agreed upon definition of AWS, but for the purpose of this thesis the definition provided by the International Committee of the Red Cross (ICRC) suffices: “Any weapon system with autonomy in its critical functions – that is, a weapon system that can select (search for, detect, identify, track or select) and attack (use of force against, neutralize, damage or destroy) targets without human intervention”. According to views expressed in the ICRC Expert Meeting on

¹⁰ DARPA, Defense Advanced Research Projects Agency. Program Information. In: DARPA Homepage [online]. Virginia.

¹¹ RODRIGUEZ ALVAREZ, J. *op. cit.* note 5, p. 44.

¹² UNGARN-STERNBERG, A., Artificial Agents and General Principles of Law. In: *German Yearbook of International Law* [online]. Trier: University of Trier, 2018, pp. 1-22.

¹³ SCHARRE, P., *Army of None: Autonomous Weapons and the Future of War*, New York/London, W. W. Norton & Company, 2018, pp. 11-20.

¹⁴ RODRIGUEZ ALVAREZ, J., *op. cit.* note 5., pp. 41-51.

¹⁵ DARPA, Defense Advanced Research Projects Agency. News and Events. In: DARPA Homepage [online]. Virginia: CODE Demonstrates Autonomy and Collaboration with Minimal Human Commands, 19.11.2018.

¹⁶ DARPA, Defense Advanced Research Projects Agency. Program Information. In: DARPA Homepage [online]. Virginia: Target Recognition and Adaption in Contested Environments (TRACE).

AWS in 2014, these are perceived to grant several advantages in the military field¹⁷. For example, they are expected to sense and process information more quickly; increase the flexibility, speed and precision of decision-making processes and targeting of combatants; and lead to outcomes that are, overall, less harmful due to the lack of human emotions in the battlefield - such as self-interest or vengeance. But most importantly, AWS would be able to undertake dangerous tasks in adverse environments and would therefore spare lives of human combatants. On the other hand, AWS are also perceived as potential threats to the value of human life and dignity, since decisions to attack would ultimately be taken by machines. The potential for the uncontrolled proliferation of these systems and the possibility for malfunctions are among the main concerns of the experts¹⁸. Additionally, according to Heather M. Roff, the use of AWS could represent the next stage in the RMA; serving to increase asymmetrical practices in armed conflicts between robots and humans. The party that deploys AWS reduces the risks they must take to achieve military objectives, whereas the real risks of death and injury still remain for human combatants and civilians. Finally, a debate also exists concerning the possibility of an increased number of armed conflicts by means of AWS, which coincides with a decrease in the likelihood of peaceful settlements and negotiation between belligerent States if the human substrate is removed¹⁹.

Responsibility for such intelligence(s) becomes a particularly complex matter due to the burgeoning nature of this kind of technology and the subsequent absence of specific legal paradigms. The main argument raised against the use of AWS is that it would be affected by the so-called “accountability gap”²⁰. Autonomy sceptics cite two fundamental problems. On the one hand, the inherent complexity of AWS and the fact that (as any human) they will never be completely flawless means an eventual breach of international law is inevitable ²¹. On the other hand, the almost endless list of

¹⁷ ICRC. *Autonomous weapon systems: technical, military, legal and humanitarian aspects*, Report of the ICRC Expert Meeting, 26-28 March 2014, Geneva.

¹⁸ WEIZMANN, N. *Intrenational debate and state practice*, in: WEIZMANN, N. and COSTAS TRASCASAS, M. (eds.), *Autonomous Weapon Systems under International Law, Academy Briefing No. 8*, Geneva Academy of international humanitarian law and Human Rights, 2014, p. 4-5.

¹⁹ ROFF, H. M., “Lethal Autonomous Weapons and Jus Ad Bellum Proportionality”, *Case Western Reserve Journal of International Law*, Vol. 47, 2015, iss. 1, p. 44-48.

²⁰ CROTOF, R., War Torts: Accountability for Autonomous Weapons. In: *University of Pennsylvania Law Review* [online]: 2016, Vol. 164, No. 6, p. 1366.

²¹ SCHARRE, P., *Autonomous Weapons and Operational Risk* [online]. Washington D. C.: Ethical Autonomy Project, 2016, p. 25.

potentially responsible individuals, including, *inter alia*, software programmers, military personnel, weapons reviewers, and political leaders, creates difficulty in assigning responsibility²². Campaigns like *Stop Killer Robots*²³ advocate a total ban on AI for military use primarily due to the alleged lack of legislation regarding State liability in that aspect. On the other hand, governments and international organisations (IO) have also made attempts to keep up with the new emerging technologies, including the ICRC²⁴; The Human Rights Watch²⁵; the EU, with its recently published *European Coordinated Plan on Artificial Intelligence* (2018)²⁶; and the United Nations (UN). The latter is playing a key role as a conditioning agent vis-à-vis States with its new open-ended Group of Governmental Experts on emerging technologies in the area of lethal autonomous weapons systems out of its fifth Review Conference of the High Contracting Parties to the Convention on Certain Conventional Weapons (CCW)²⁷.

This paper will aim to clarify the issue of international responsibility by examining the applicability of the International Law Commission's (ILC) *Draft articles on Responsibility of States for Internationally Wrongful Acts* (hereinafter "ILC-Articles")²⁸ to violations of international law committed *prima facie* by an AWS. The analysis begins with section "A", which serves as an introduction to the topic. The 'general rules on the responsibility of States' are addressed in section "B", where an

²² AMOROSO, D. *Jus in bello* and *jus ad bellum* arguments against autonomy in weapons systems: A reappraisal. In: *QIL* [online]. [Italy]: International Law Department, University of Cagliari, 2017, pp. 5-31.

²³ Campaign to Stop Killer Robots. *The Threat of Fully Autonomous Weapons*. In: *Campaign to Stop Killer Robots Homepage* [online], 2020 [accessed: 24 November 2019]. Available at: <https://www.stopkillerrobots.org/learn/>.

²⁴ ICRC: *Views of the International Committee of the Red Cross (ICRC) on autonomous weapon system*. [Report]: Convention on Certain Conventional Weapons (CCW) Meeting of Experts on Lethal Autonomous Weapons Systems (LAWS) 11-15 April 2016, Geneva, 2016-, [accessed: 24 November 2019]. Available at: <https://www.icrc.org/en/document/views-icrc-autonomous-weapon-system>.

²⁵ Human Rights Watch: *Loosing Humanity: The Case against Killer Robots*. [Legal clinic]: The International Human Rights Clinic (IHRC) at Harvard Law School, 2012-, [accessed: 24 November 2019]. Available at: https://www.hrw.org/sites/default/files/reports/arms1112_ForUpload.pdf.

²⁶ European Commission, *Coordinated Plan on Artificial Intelligence*, Communication from the Commission to the European Parliament, The European Council, The Council, the European Economic and Social Committee and the Committee of the Regions, Brussels, December 2018 (COM(2018) 795 final).

²⁷ 2019 Group of Governmental Experts on Lethal Autonomous Weapons Systems (LAWS) [online]: Report of the 2019 session of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems: Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects, 2019.

²⁸ International Law Commission, *Draft Articles on Responsibility of States for Internationally Wrongful Acts*, Doc. UN/A/56/49 (Vol. I) Corr. 4: UNITED NATIONS, *The Work of the International Law Commission*, New York, Vol. 1, 8th Ed., 2012, pp. 204-2014.

overview is provided both of the legal nature of the ILC-Articles and of the specific chapters that will be most relevant for the purpose of this paper, namely; the rules to state the existence of a breach of an international obligation and the rules of attribution of a conduct to a State. This theoretical framework will subsequently be applied to a ‘case study about the military use of Autonomous Weapon Systems’ discussed in section “C” of this paper. This section is divided into four subsections; the first subsection addresses the question of ‘possible breaches of substantial rules of International Law’, which aims to provide an analysis of the potential infringement of the three selected International Law domains, i.e. *ius ad bellum*, *ius in bello*, and International Human Rights Law, by the deployment of AWS. The second subsection deals with questions of ‘accountability for internationally wrongful acts resulting from the State use of AWS’. Within this subsection, the responsibility regime applicable to state agents recognized in the ILC-Articles will be discussed and these will then be contrasted against the applicable regime to international organizations of which the States in question are members. The third subsection discusses the ‘responsibility for breaches of collective obligations’, which, in turn, raises the existing differences between *erga omnes* and *erga omnes partes* obligations, and exposes the aggravated responsibility regime applicable to ‘serious breaches of obligations under peremptory norms’. The fourth and final subsection explores ‘the role of international judicial bodies’ by proposing the International Court of Justice as a potential international forum to deal with cases of international responsibility associated to the State use of AWS. Section “D” completes the analysis carried out in this study by means of a conclusion that aims to serve both as a summary and as a way forward.

B. General Rules on State Responsibility for Internationally Wrongful Acts

Before any analysis, it is necessary to establish a theoretical framework for this study. The following will serve as an examination of the applicable provisions of the ILC’s Draft Articles on State Responsibility as a premise to subsequently answer the main question about responsibility for internationally wrongful acts arising from State use of AWS.

The International Law Commission (ILC) approved the *Draft articles on Responsibility of States for Internationally Wrongful Acts* (hereinafter “ILC-Articles”) in 2001. Despite being an instrument of ‘soft-law’ and of subsidiary legal nature, the ILC-Articles are not deprived of normative value²⁹. The draft was conceived as a *general* legal framework applicable to cases of international responsibility of States in which, *inter alia*, there are no special norms applicable (Article 55 ILC-Articles)³⁰. Furthermore, the ILC-Articles must also be applied in eternal concordance with the Charter of the United Nations (UNC) (Article 59)³¹.

An internationally wrongful act is the result of certain behaviour attributable to a State consisting of an action or omission that constitutes a violation of an international obligation in force of that State³². The fundamental principle in the matter is that “[e]very internationally wrongful act of a State entails the international responsibility of that State” (Article 1 ILC-Articles). It is a principle that has been widely used in international jurisprudence and is considered of customary nature³³. The ILC opted for the term “international obligations”, since they are characterized by their subjective character, because these obligations are due to another State (or States) or to the entire international community as a whole. The inevitable consequence of a State violating their obligations is international responsibility, without entering into questions of validity or enforceability. The qualification of a certain behaviour of a State as an internationally wrongful act depends exclusively on international law and not on the internal law of States (Article 3 ILC-Articles).

Chapter II defines the circumstances under which the attribution under Article 2 ILC-Articles is justified, i.e., when behaviour based on an action or omission or a series of actions or omissions is to be considered as State behaviour. The attribution of a behaviour to the State as a subject of international law is based on criteria determined by international law and not on the simple recognition of a natural causal relationship.

²⁹ CASANOVAS, O., “La Responsabilidad Internacional del Estado”, in: CASANOVAS, O. and RODRIGO, A. J. (eds.), *Compendio de Derecho Internacional Público*, Madrid, Editorial Tecnos, 2019, pp. 541-543.

³⁰ Id., pp. 541-542

³¹ Id., p. 542.

³² CRAWFORD, J., *Los artículos de la Comisión de Derecho Internacional sobre la Responsabilidad Internacional del Estado: introducción, texto y comentarios*, Madrid, Dykinson, 2004, pp. 115-119.

³³ CASANOVAS, O., “La Responsabilidad Internacional del Estado”, *op. cit.*, note 29, p. 543.

In an analytical operation, attribution is to be (mentally) treated as a separate concept from the overall qualification of “internationally wrongful act”. Its purpose is to determine that there is in fact an *act* of the State for the purposes of responsibility. Proving that certain behaviour is attributable to the State says nothing, *per se*, about the legality or illegality of that behaviour.

The second constitutive element of an internationally wrongful act requires that the behaviour attributable to a State actually constitutes a violation of an international obligation (Article 2b) ILC-Articles). A violation of an international obligation consists in the conduct of a State that “is not in conformity with what is required of it by that obligation, regardless of its origin or character” (Article 12 ILC-Articles). An element that determines the existence of a violation of an international obligation is the temporary factor, which means that the obligation has to be in force for the State in the moment of infringement (Article 13 ILC-Articles). It is nevertheless always a question conditioned by the type and content of the substantive international obligations and the specific context in which it occurs.

Finally, Chapter III contains the special regime applicable to serious breaches of obligations under peremptory norms of general international law. For the purposes of responsibility of States, these are obligations to the international community as a whole where all States have a legitimate interest in their protection. The derived obligations and interests are, thus, opposable to the whole international community (*erga omnes*). The legal consequences of serious violations are regulated in Article 41 of the ILC-Articles, which requires that States must actively cooperate to put an end to the breach and must also refrain from recognising a situation “within the meaning of Article 40” as lawful (discussed below)³⁴.

C. State Responsibility and Artificial Intelligence: Case Study about the Military Use of Autonomous Weapon Systems

³⁴ See Article 41 para. 2 ILC-Articles.

The ethical and legal implications of the development and use of weapon systems capable of detecting, identifying, and subsequently neutralizing a specific target as a result of a decision-making process wholly without significant human intervention are gaining the attention of the international community, especially in view of recent events, in which States like the US have allegedly been involved in attacks perpetrated by remote controlled *unmanned aerial vehicles* (UAVs) against Afghan civilians³⁵. A similar situation could be seen in Pakistan, between 2004 and 2014³⁶, and another perhaps more latent example, is the one concerning the 2020 targeted US drone strike against Iranian military general Soleimani³⁷. In the event, that such cross border attacks are caused by conventional remote-controlled drones, it appears, in principle, to be an effortless task to analyse possible violations of international law based on the decision-making process of a human remote pilot. However, with increasing autonomy, there is a well-founded expectation that a time will come when UAVs will select and pursue targets without human control (as discussed below), leaving life-and-death decisions entirely to computer-controlled processes. This paper focuses on the potential shift towards self-piloting, autonomous UAVs; when applied to the Soleimani case, the removal of a human pilot from the equation would raise a series of questions regarding the existence of an internationally wrongful act and who (or what) to hold responsible for the actions of this form of AWS.

This chapter will therefore serve as an examination of the possible applications of the aforementioned general rules on State responsibility to the specific case of State use of AWS, as in the examples highlighted above. The reason behind the choice of this specific type of AI is twofold; firstly, the development and commercialisation of unmanned defence *Mini-drones* (*swarms*) is already on the national security agenda of multiple States³⁸; and secondly, there is an objectively high probability that such

³⁵ BAÑOS, J. J.. Un dron de EE.UU. mata por error a cuarenta jornaleros en Afganistán. In: *La Vanguardia* [online], 2019.

³⁶ HEYNS, C., AKANDE, D., HILL-CAWTHORNE, L. and CHENGETA, T. The international law framework regulating the use of armed drones. In: *Cambridge University Press* [online]. [United Kingdom]: British Institute of International and Comparative Law, 2016. Vol. 65, Issue 4, pp. 791-827.

³⁷ MARCUS, J., “Qasem Soleimani: por qué EE.UU. mató al general de Irán ahora (y qué es lo que se espera que ocurra)”. In: *BBC News Mundo* [online], 03.01.2020 [accessed: 21.01.2020]. Available at: <https://www.bbc.com/mundo/noticias-internacional-50983463>.

³⁸ RODRIQUEZ, J., MOJAL, X., FONT, T. and BRUNET, P. [online]: *Novel Weapons against Ethics and People, Armed Drones and Autonomous Drones* [report]. Centre Delàs d’Estudis per la Pau, 2019.

devices may be involved in international law controversies if States begin to use them regularly in the military field (as already seen in the cases involving US-drones³⁹).

I. Possible breaches of international obligations of States

In order to identify the existence of internationally wrongful acts by States using AI, the requisite of the ILC-Articles regarding the breach of an international obligation of the State will first be analysed. The source of States' international obligations may vary, however, this paper will stick to the study of three substantive areas of international law, which may have a direct bearing on the legality of the use of AWS: the law governing the use of force by one State on another State's territory – *ius ad bellum* –, international humanitarian law – *ius in bello* –, and IHL.

1. *Ius ad bellum*

In light of the aforementioned concerns, it is important to summarise *ius ad bellum* anew, which governs the use of force between States. The basic provision of the *ius ad bellum* is contained in Article 2(4) of the Charter of the United Nations (UNC)⁴⁰, which encompasses the prohibition on the use or threat of inter-State force. Article 2(4) UNC counts as the codification of the peremptory norm of customary origin that limits the use of force between States, from which State obligations towards the entire international community (*erga omnes*) derive⁴¹. The employment of any armed force in the territory of a foreign State, without its previous consent, shall be considered a violation of Article 2(4) UNC unless the two given exceptions apply⁴²: authorisation by the UN Security Council (SC) and the exercise of the inherent right of States to individual or collective self-defence (Article 51 UNC)⁴³.

³⁹ Id.

⁴⁰ SCHWARTMANN, R., *Völker- und Europarecht*, Heidelberg, C.F. Müller, 10th ed., 2015, p. 6.

⁴¹ United Nations, Charter of the United Nations, 24 October 1945, 1 UNTS XVI.

⁴² AMOROSO, D. *Jus in bello* and *jus ad bellum* arguments against autonomy in weapons systems, *op. cit.*, note 22, pp. 5-31.

⁴³ BERBER, F., *Lehrbuch des Völkerrechts/ 2. Kriegsrecht*, Munich, Beck, 3rd ed., 1969, p. 41.

For a correct understanding of the concept of *use* of force in the sense of Article 2(4) UNC, it has to be interpreted in light of the essential values and purposes of the Charter as a whole and, particularly, in relation to its preamble and Article 51. On the one hand, it is understood that not all kinds of confrontation are included in the ban, but only armed or military force attributable to a State (questions of attribution discussed below)⁴⁴. On the other hand, with regard to the means of war to be used, the UNC covers both weapons and conventional military forces directed against a foreign territory. However, the list of war methods is not exhaustive, so it should be noted that the terms “armed” and “military” in the UNC can refer to a broad conception of force⁴⁵. In principle, the provision reflects a prohibition on any war methods capable of producing effects comparable to traditional weapons, i.e. the occurrence of human injury or death and/or serious property damage⁴⁶. Looking back to the deaths caused by cross-border drone strikes helps in understanding why autonomous UAVs could be categorized as lethal war methods as long as they produce the mentioned effects. Their use could cause the breach of the international obligation of States to refrain from the threat or use of force against each other.

Regarding the concept of *threat* of force, Article 2(4) UNC also includes acts that may jeopardize the values of the Charter before an effective deployment of armed forces. Following the thought of some scholars, the mere ownership or development of AWS could compromise the objectives of the UNC to eliminate any threat to ‘international peace and security’⁴⁷. As stated in the 1984 Declaration on the Right of Peoples to Peace, the aim of the legal regime of international peace and security consists in ensuring that “the policies of States [are] directed towards the elimination of the threat of war”⁴⁸. Broadly understood, this could very well include an evaluation of national policies allowing the use of AWS due to their potential lethality. Nevertheless, as could be seen with the example of nuclear weapons in 1996⁴⁹, the International Court

⁴⁴ HEINTSCHEL VON HEINEGG, W. in: EPPING, V., HEINTSCHEL VON HEINEGG, W. and IPSEN, K. (eds.), *Völkerrecht*, Munich, Ein Studienbuch, 7th ed., 2018, pp. 1138-1139 (18).

⁴⁵ Id.

⁴⁶ BERBER, F., *op. cit.*, note 44.

⁴⁷ AMOROSO, D. *Jus in bello* and *jus ad bellum* arguments against autonomy in weapons systems, *op. cit.*, note 22. pp. 5-31.

⁴⁸ *Declaration on the Right of Peoples to Peace*, (A/RES/39/11) November 12, 1984, para. 3.

⁴⁹ *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, ICJ GL No 95, Report 226, ICGJ 205, ICJ 1996.

of Justice (ICJ) opts for a purpose-oriented interpretation of threat, closely linked to the effective use of force, in that it applies parameters based on its hypothetical legality (or illegality). A threat of force will be unlawful on a case-by-case basis, if the specific behaviour that sustains said threat could be considered a violation of Article 2(4) UNC once put into practice⁵⁰. Applied to the case at hand, the mere possession or development of AWS would not be reason enough to qualify as a threat contrary to international law, even if they had the potential of causing human injury, death, or serious property damage. Hypothetically however, if State A were to develop AWS with the clear intent to direct it against State B, it could be considered as an unlawful threat and would subsequently qualify as an unjustified use of force if finally put into practice, as long as the aforementioned exceptions did not apply. The intention of these practices is therefore crucial to the determination of threat, i.e. these systems should not be developed with the sole intention of causing an inter-State conflict⁵¹.

As such, it can be concluded that States should (at least theoretically) be entitled to use AWS under the umbrella of self-defence (Article 51 UNC) against a previous *armed attack* by another State⁵². It will therefore be vital to determine *if* and *when* said armed attack takes place when deciding to use UAVs against the alleged aggressor. In this regard, Article 2 of the Resolution on the Definition of Aggression⁵³ defines the first use of armed force by a State in contravention of the UNC as "*prima facie* evidence of an act of aggression". This will ultimately be determined by the SC (Article 39 UNC) in attention to the specific circumstances of each case. This implies that, while every use of force against the territorial integrity of another State is prohibited, not every such use of force will constitute an armed attack that justifies the use of autonomous drones. In the *Nicaragua* case, the ICJ affirmed "it will be necessary to distinguish the most grave forms of the use of force [armed attack] from other less grave forms [e.g. 'mere frontier' incidents]"⁵⁴. Although the Preamble of the Resolution

⁵⁰ KÖTTER, W., Atomwaffeneinsatz ist völkerrechtswiedrig. In: AG Friedensforschung [online]. 8 July 2006.

⁵¹ *Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations*, (A/RES/2625 (XXV)) 24 October 1970.

⁵² HEYNS, C., AKANDE, D., HILL-CAWTHORNE, L. and CHENGETA, T., *op. cit.*, note 37, pp. 791-827.

⁵³ *Definition of Aggression* (UNGA Res. 3314 (XXIX)), 14 December 1974.

⁵⁴ *Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v United States of America)*, Merits, Reports, ICJ 1986.

considers aggression “the most serious and dangerous form of the illegal use of force”, the ICJ nevertheless refers to armed attack as “the most grave form of the use of force”⁵⁵. However, both sources implicitly suggest the possibility of first attacks that do not constitute a violation of the UNC, if the acts or concrete consequences are not of sufficient gravity⁵⁶. This is especially relevant if the first use of armed force is through AWS as an early defence against the confirmed launch of a long-range projectile. In this case, the first use of force could be justified in the face of an imminent threat. The concept of imminence is a question that goes beyond the scope of this analysis, nevertheless there seems to be a clear response from the side of the UN, following the Secretary General’s report which makes clear that States can take military action as long as the threatened attack is imminent, no other means would deflect it, and the action is proportionate⁵⁷. The State could thus make use of its inherent right to “self-help”⁵⁸ by deploying defence UAVs without failing its obligations under Article 2(4) UNC, provided the SC is duly informed and confirms said state of imminent threat.

Article 51 UNC expressly stipulates the obligation of States to inform the SC of any self-defence measures adopted against another State. The notion of self-defence is therefore the first step within the two-phase system of the modern *ius ad bellum*, in which it is left to the State’s discretion, whether it deploys autonomous UAVs in another State’s territory. This process is preliminary to the last revision phase, in which the SC must assess the legality of the measures taken by the State concerned according to the principles described above. In this sense, the non-delivery of such notice alone would not necessarily result in an internationally wrongful act, especially if the Council subsequently views the adopted measures as justified. Nevertheless, “the absence of a report may be one of the factors indicating whether the State in question was itself convinced that it was acting in self-defence”⁵⁹. Additionally, such an omission could compromise the transparency required by the Council and the justification owed to the

⁵⁵ IRMAKKESEN, *The Notion of Armed Attack under the UN Charter and the Notion of International Armed Conflict – Interrelated or Distinct?*, Geneva Academy of International Humanitarian Law and Human Rights, 2014, pp. 4-5.

⁵⁶ CASANOVAS, O., “Noción de Ataque Armado”, *op. cit.*, note 29, pp. 434-435.

⁵⁷ Report of the High-Level Panel Established by the UN Secretary-General (December 2004), A/59/565 (2004).

⁵⁸ DINSTEIN, Y., *War, Aggression and Self-Defence*, DePaul University, Cambridge/ Chicago, Cambridge University Press, 2005, p. 175.

⁵⁹ ICJ, *Nicaragua v United States*, *op. cit.* note 55.

international community⁶⁰. The SC itself therefore represents a limit to the States' right to self-defence. As such, States will have to contemplate this when planning to use AWS and still fulfil their obligations vis-à-vis the rest of the international community.

2. *Ius in bello*

Having reviewed the main aspects around *whether* and *when* to use AWS as a weapon of force in a foreign territory, this section will analyse *how* said force may be used through the second relevant key body of international law, namely, International Humanitarian Law.

Whether a strike by an AWS is regulated by IHL will depend on whether said situation takes place in an international or a non-international armed conflict. If a drone strike did not take place within the context of an armed conflict, IHL would give way to International Human Rights Law, which would exclusively govern the use of lethal force (discussed below)⁶¹. On the other hand, unlike *ius ad bellum*, *ius in bello* is primarily addressed to human beings rather than to the territorial integrity of a sovereign State as a whole. While the principal subjects of IHL are still States, rules on the conduct of hostilities – i.e. the rules of *distinction*, *proportionality*, *military necessity*, *precautions in attack* and, to a certain extent, *the Martens Clause* - are addressed at belligerents who plan, decide upon, and carry out an attack, by creating specific obligations that must be respected so as to avoid being held accountable for violations⁶². In order to fall under the inter-State spectrum, said violations will have to consist of conduct attributable to a State under specific circumstances (discussed in the following chapter), and must also fulfil the “objective element of responsibility of being unlawful”⁶³. In the case at hand, this translates as the infringement of concrete provisions of IHL by the State use of AWS.

It is not the aim of the present paper to undertake an exhaustive analysis of all

⁶⁰ HEYNS, C., AKANDE, D., HILL-CAWTHORNE, L. and CHENGETA T. *op. cit.*, note 37, p. 804.

⁶¹ *Id.*, p. 805.

⁶² ICRC. *Autonomous weapon systems: implications of increasing autonomy in the critical functions of weapons*, report of the ICRC Expert Meeting, 15-16 March 2016, Geneva.

⁶³ SASSOLI, M., State Responsibility for Violations of International Humanitarian Law. In: *Cambridge University Press* [online]: *International Review of the Red Cross*, 2002, Vol. 84, Nº 846.

principles involved in IHL, therefore this segment shall limit itself to examining weapons law and the most relevant principles of targeting law for the use of AWS. These are the principles of distinction, proportionality, humanity and precautions in attack.

a) *Requirement to review new weapons*

Although IHL-treaties do not specifically regulate AWS, ensuring that any new weapon is capable of being used in accordance with IHL remains indispensable. Article 36 of Additional Protocol I to the Geneva Conventions 1969⁶⁴ (Protocol I) states:

“In the study, development, acquisition or adoption of a new weapon, means or method of war, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by its Protocol or by any other rule of international law applicable to the High Contracting Party”⁶⁵.

The ICRC argues that all States, whether or not they are a party to Protocol I, have the obligation of conducting weapons reviews because “the faithful and responsible application of its international law obligations would require a State to ensure that the new weapons, means and methods of warfare it develops or acquires will not violate these obligations⁶⁶”. The crux of the matter is whether a weapon’s design and function are intrinsically inconsistent with IHL rules. For a producing State, reviews will have to take place at an early stage of “technical development, and in any case before entering into the production contract”⁶⁷. On the other hand, acquiring States will also have to ensure their compatibility with IHL before effective possession. The ICRC adds that “an existing weapon that is modified in a way that alters its function, or a weapon that has already passed a legal review but that is subsequently modified”

⁶⁴ Protocol Additional to the Geneva Conventions of 12 August 1949 (Protocol I), and relating to the Protection of Victims of International Armed Conflicts, June 8, 1977.

⁶⁵ See Article 36 Protocol I

⁶⁶ ICRC, *A Guide to the Legal Review of New Weapons, Means and Methods of Warfare: Measures to Implement Article 36 of Additional Protocol I of 1977*, Vol. 88, Nº 864, December 2006, Geneva.

⁶⁷ Id.

should be reviewed anew⁶⁸. This is particularly relevant for AWS, since robots are generally complex systems that tend to combine different components and are constantly undergoing modifications.

In order to determine whether a new or modified weapon, like an autonomous UAV, would be prohibited by IHL, its compatibility with the applicable treaties should be examined. It may be possible that new or modified UAVs contain components prohibited by international treaties, but, since there is still no provision that prohibits them in general terms, it is convenient to resort to customary law and, in particular, the principles of distinction (Article 51(4) Protocol I) and of prohibiting unnecessary suffering (Article 35(2) Protocol I). Both principles place emphasis on the weapon's objective nature rather than on the subjective intention of potential users. According to the first principle, an autonomous UAV would be deemed indiscriminate in its manufacturing and/or programming, if it cannot distinguish civilians from specifically targeted combatants⁶⁹. On the other hand, the common interpretation of the second rule, enshrined in Article 35(2) of Protocol I, is that "international law only forbids the use of weapons that increase suffering without really increasing military advantage"⁷⁰. In that sense, a weapon is proscribed only if it is designed to cause injury or suffering that could otherwise be avoided, given the military constraints of the given situation. An example of an unlawful AWS under this rule would be one equipped with warheads filled with glass, since this complicates *ex post* medical treatment (unnecessary suffering).

As such, the fact that AWS are programmed to autonomously decide which target to engage does not *per se* qualify as a violation of any of the mentioned principles. The requirement for a legal review, of Article 36 of Additional Protocol I, ensures that the weapon is not indiscriminate by default and that it would not cause unnecessary suffering or superfluous injury. All States will have to ensure that the AWS is equipped with sufficiently reliable data to ensure it can be aimed at a military

⁶⁸ Id.

⁶⁹ ANDERSON, K., Readings: Jeffrey S. Thurnher on Law of Armed Conflict Applied to Autonomous Weapon Systems. In: *Lawfare* [online]. Cyber & Technology, 2013.

⁷⁰ DINSTEIN, Y., *The Conduct of Hostilities under the Law of International Armed Conflict*, 5th ed., Cambridge, Cambridge University Press, 2007, p. 57-61.

objective and that it is armed exclusively with permitted weapons and ammunition⁷¹.

b) Principle of distinction

Once deployed, AWS would have to comply with IHL rules of conduct in armed conflicts in order to avoid an internationally wrongful act. The rule of distinction is part of customary international law and is considered a norm of *ius cogens*⁷². For international armed conflicts, Protocol I requires armed forces to distinguish combatants from non-combatants, ensuring attacks are “limited strictly to military objectives”⁷³. Similar provisions are to be found in the Additional Protocol to the Geneva Conventions (Protocol II) applicable to non-international conflicts⁷⁴. Some treaties on conventional weapons also contain the rule of distinction prohibiting “the indiscriminate use of weapons” “against the civilian population as such or against individual civilians”⁷⁵. The rule of distinction poses one of the greatest challenges to AWS because of four major reasons: technological limitations, the lack of precise definitions in IHL treaties, the intricate nature of today’s armed conflicts, and possible technical malfunctions in AWS⁷⁶. An autonomous UAV must be able to process all the information necessary to distinguish between different target categories (combatants; potential members of an organized armed group) and/or specific conducts (direct participation in hostilities) that make a person a legitimate target⁷⁷. According to Sassóli, it is not a solution to use AWS only in an environment where no civilians could

⁷¹ *Legality of the Threat or Use of Nuclear Weapons*, *op. cit.*, note 50 ; TAKEMURA, H., Unmanned Aerial Vehicles: Humanization from International Humanitarian Law. In: *Wisconsin International Law* [online]. University of Wisconsin, 2019. Vol. 32, Nº. 3, pp. 521-546.

⁷² CHENGETA, T., Measuring Autonomous Weapon Systems against International Humanitarian Law Rules. In: *Journal of Law and Cyber Warfare* [online]: Harvard Law School; Midlands State University, Faculty of Law, 2016, Vol. 5, iss. 1(c), p. 76.

⁷³ See Article 48 Protocol I.

⁷⁴ Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II) art. 13(2), June 8, 1977.

⁷⁵ Protocol II to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which may be deemed to be Excessively Injurious or to have Indiscriminate Effects article 3(2), Oct. 10, 1980.

⁷⁶ CHENGETA, T., Measuring Autonomous Weapon Systems against International Humanitarian Law Rules, *op. cit.*, note 73, p. 74.

⁷⁷ SASSOLI, M., Autonomous Weapons and International Humanitarian Law: Advantages, Open Technical Questions and Legal Issues to be Clarified. In: *International Law Studies* [online]: U.S. Naval War College, 2014, Vol. 90, Nº. 308, p. 319.

be endangered, since any (initially) legitimate target may surrender (*hors de combat*), *ergo*, become an illegitimate target⁷⁸.

As for military objects, Article 52(2) of Protocol I defines them as objects with an “effective contribution to military action” - the neutralization of which gives a belligerent a definite and real military advantage “in the circumstances ruling at the time”⁷⁹. Therefore, an autonomous UAV’s decision to target a specific objective must be based on the assumption of “direct and tangible military advantage” excluding, e.g., objects indispensable to the survival of the civilian population⁸⁰. In contemporary armed conflicts, especially those that involve terrorist groups, civilians may willingly or unwillingly provide shields to combatants. Armed conflicts are brought to civilian dwellings where fighters (usually not wearing any distinctive uniform) seek cover in crowds where some civilians may even support them or directly take part in hostilities. In this confusing scenario, an AWS shall still be able to distinguish between “persons who are not part of States’ armed forces or who are not members of an armed group participating in an armed conflict” (civilians) and those who have lost their protection due to their supportive behaviour towards a particular group or State involved in hostilities (belligerents)⁸¹.

It is not unreasonable to think that autonomous UAVs may be used in the war on terrorism, especially in view of the situation where remote controlled drones are currently the main weapons for that purpose⁸². The real difficulty for such systems lies in the methods for reliably identifying terrorists/combatants, which are further hindered by the secrecy of operations as well as uncertainty surrounding the moment when civilians, who supporting or directly participating in hostilities become legitimate targets⁸³.

c) *Principle of proportionality*

⁷⁸ Id.

⁷⁹ See Article 52 para. 2 Protocol I.

⁸⁰ See Article 54 Protocol II.

⁸¹ ICRC. Rule 5. Definition of Civilians. In: *IHL Database: Customary IHL* [online].

⁸² See the examples mentioned above regarding news about US-drone strikes, p. 5.

⁸³ CHENGETA, T., Measuring Autonomous Weapon Systems against International Humanitarian Law Rules, *op. cit.*, note 73, p. 83- 88.

This principle, which is codified in Article 51(5)(b) of Protocol I and in Article 3(8) of Amended Protocol II to the Convention on CCW⁸⁴, aims to prohibit attacks, which, even if directed at military objectives, “may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated”⁸⁵. In order to determine the proportionality of a military operation, many factors must be taken into account on a case-by-case basis⁸⁶ after “everything feasible [has been done] to verify that the objectives to be attacked are neither civilians nor civilian objects and are not subject to special protection”⁸⁷. In this sense, multiple civilian casualties may not be deemed disproportionate (collateral damage⁸⁸) if the main target was a senior leader of the enemy forces, but at the same time, even a single civilian casualty may be excessive if the enemy soldiers killed were of little relevance or posed no threat⁸⁹. A State’s deployment of an autonomous drone in an armed conflict will, therefore, be scrutinized in order to determine whether the expected collateral damage was excessive compared to the anticipated military advantage of the strike, and whether those expectations were reasonable under the concrete circumstances⁹⁰. However, some scholars already predict that the greatest difficulty for States using AWS will be linked to the evaluation of the anticipated military advantage rather than to the evaluation of risk to civilians⁹¹. After all, even when only human soldiers are involved, the “concrete and direct military advantage anticipated” from an attack on a legitimate target tends to change rapidly according to situational developments. A miscalculation or technical malfunction of the UAV could, in this sense, lead to disproportionate casualties and to a breach of the State’s obligations under IHL.

⁸⁴ Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices as amended on 3 May 1996 (Protocol II as amended on 3 May 1996), art. 3, para. 8, May 3, 1996, 2048 U.N.T.S. 133.

⁸⁵ See Article 51 para. 5 letter b Protocol I.

⁸⁶ Human Rights Watch (HRW). *Losing Humanity: The Case against Killer Robots*. In: *Human Rights Watch Homepage* [online]. International Human Rights Clinic, Human Rights Program at Harvard Law School, 2012.

⁸⁷ See Article 57 Protocol I and II.

⁸⁸ McNEAL, G. S., Targeted Killing and Accountability. In: *The Georgetown Law Journal* [online], Vol. 102:681, 2014, p. 740.

⁸⁹ SCHMITT, M. N.. Unmanned Combat Aircraft Systems And International Humanitarian Law: Simplifying The Oft Benighted Debate. In: *Boston University International Law Journal* [online]. Boston University, 2012. Vol. 30:595.

⁹⁰ Id.

⁹¹ SASSOLI, M., Autonomous Weapons and International Humanitarian Law, *op. cit.*, note 78, p. 332.

d) *Principle of humanity*

AWS also raise concern among experts in relation to the principle of humanity enshrined in the *Martens Clause*, which prohibits weapons that run counter to the “dictates of public conscience”⁹². The clause originated at the 1899 and 1907 Hague Conventions, later codified in Article 1, para. 2 of Protocol I, which dictates:

“In cases not covered by this Protocol or by other international agreements, civilians and combatants remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from dictates of public conscience.”⁹³

This residual provision is used in the event that a means of war does not expressly violate an existing treaty or customary law in order to sufficiently cover possible violations of the more general principles of humanity or the dictates of public conscience. As such, the principle is a universal reference point, aiming to prevent the assumption that “anything not explicitly prohibited is permitted”⁹⁴. As was noted by the ICJ, the customary rule reflected in the *Martens Clause* “had proved to be an effective means of addressing rapid evolution of military technology”, which is crucial in the evaluation and governance of emerging weapon systems like AWS that tend to develop faster than international law⁹⁵. According to the principle of humanity, States should cease development and/or use of any weapons that fail to meet the legal-ethical requirements that it reflects. As mentioned in the introduction, there is an expectation that increasing autonomy will mean that AWS will select and pursue targets without any human input, leaving life-and-death decisions entirely to computer-controlled processes. . This may raise ethical questions regarding the responsibility of humans in the use of force and the taking of human life, which go beyond questions of IHL compliance in the

⁹² ICRC, *A Guide to the Legal Review of New Weapons, Means and Methods of Warfare*, *op. cit.*, note 67, p. 17.

⁹³ See Article 1, para. 2 Protocol I: Hague Convention with Respect to the Laws and Customs of War on Land and its Annex, Regulation Concerning the Laws and Customs of War on Land (Hague Convention II), July 29, 1899; Hague Convention Respecting the Laws and Customs of War on Land and its Annex: Regulations Concerning the Laws and Customs of War on Land (Hague Convention IV), October 18, 1907.

⁹⁴ DAVISON, N., A legal perspective: Autonomous weapon systems under international humanitarian law. In: *International Committee of the Red Cross Homepage* [online]. Geneva: Arms Unit, Legal Division, 31 January 2018, p. 8.

⁹⁵ *Legality of Threat or Use of Nuclear Weapons*, *op. cit.*, note 50, paras. 78, 84.

conduct of hostilities⁹⁶. In regards to public conscience, Robert Arkin conducted a public opinion survey, which included the relevant autonomous technology researchers, policymakers and military personnel⁹⁷. The social survey revealed that confidence in autonomous systems is comparatively low, which is coupled with a general preference for weapons that include some type of human intervention in key target selection processes. Participants assured that “an autonomous robot [taking life] in both open warfare and covert operations is unacceptable”, mainly because of the fear that it could lead to uncontrolled collateral damage; civilian loss of life⁹⁸. Even if such evidence does not create binding law, it does not preclude States’ responsibilities, e.g. conduct appropriate reviews of fully AWS that address and adjust to public concerns.

e) Precautions in attack and the question of human control

The concept of “meaningful human control” was amongst the key issues discussed at the 2014 UN CCW meeting⁹⁹. Some experts emphasised the need for measuring *autonomy* through the development of a system - based on objective criteria such as the “ability to perform pre-programmed tasks without further human action”¹⁰⁰. In the absence of an internationally agreed upon definition of the concept of autonomy and the necessary degree of meaningful human control in order to comply with IHL, some scholars propose resorting to the principle of precautions in attack reflected in Article 57 of Protocol I. According to this principle, “those who plan or decide upon an attack shall take all *feasible* precautions in the choice of means and methods of attack to spare the civilian population ¹⁰¹”. This principle reinforces the already discussed principle of distinction and confers a certain degree of discretion on the planning of an attack. In the case at hand, this translates into the act of deciding to use an autonomous UAV for a specific military operation. Since commanders are usually in charge of the *ex-ante* planning of rules of engagement, they would also most likely plan how and when to deploy a (intrinsically) licit AWS. Commanders would have to respond to the

⁹⁶ DAVISON, N., *op. cit.*, note 97, pp. 8-9.

⁹⁷ ARKIN, R. C., *Governing Lethal Behavior in Autonomous Robots*, Florida, Taylor & Francis Group, 2009, pp. 49-53.

⁹⁸ Human Rights Watch (HRW). *Losing Humanity*, *op. cit.*, note 87, p. 36

⁹⁹ Chairperson of the Meeting of Experts, UN Convention on Certain Conventional Weapons, Report of the 2014 Informal Meeting of Experts on Lethal Autonomous Weapons Systems (LAWS), para. 20.

¹⁰⁰ *Id.*

¹⁰¹ *See* Article 57 para. 2 letter a (ii) Protocol I.

given circumstances reasonably and with good faith “on the basis of all information available to him/her at the relevant time”¹⁰², “in order to make sure that the objectives to be attacked are neither civilians nor civilian objects¹⁰³”. Although it is possible that future AWS will facilitate an evaluation of the likelihood of harming civilian targets, the final decision to deploy *that* AWS for *that* specific occasion lies with the commander¹⁰⁴. Even though the weapon’s precision and range are factors to be assessed, the principle of precautions in attack does not imply any prohibition of specific weapons¹⁰⁵. It rather focuses on the decision-making process during the preliminary phase and the available information at that point regarding civilian presence. Even if fully AWSs, as defined throughout this study, are someday expected to engage targets autonomously and might therefore slightly deviate from the pre-established operational plan, the legal standard will still focus on the reasonableness of the precautions taken¹⁰⁶. Once deployed, there seems to be a broad consensus that the ideal that AWS should resemble must inevitably be the human being¹⁰⁷. An autonomous UAV deployed within an on-going armed conflict will theoretically be compatible with IHL, if its response capacity is evaluated as comparable to that of a human being under the same conditions. The question then revolves around whether the autonomous system is able to act in a given case with feasible precautionary measures¹⁰⁸ comparable to those a human soldier could have shown, on the assumption that “feasible” will always be what is in accordance with IHL¹⁰⁹. Also, in a scenario where the only weapon available was an AWS, the commander could claim that, with the information possessed, there were no other feasible options at the time - even when causing great civilian casualties. Nothing would prevent, however, the application of other IHL criteria such as the proportionality rule mentioned above¹¹⁰.

¹⁰² ANDERSON, K., Readings: Jeffrey S. Thurnher on Law of Armed Conflict Applied to Autonomous Weapon Systems. In: *Lawfare* [online]. Cyber & Technology, 2013.

¹⁰³ See Article 57 para. 2 letter a (i) Protocol I.

¹⁰⁴ McNEAL, G. S., *op. cit.*, note 89, pp. 739-750.

¹⁰⁵ ICRC. Commentary of 1987: Precautions in attack. In: *ICRC Homepage* [online], 8 June 1977, para. 2201.

¹⁰⁶ ANDERSON, K., *op. cit.*, note 103, pp. 404-405.

¹⁰⁷ SASSOLI, M., Autonomous Weapons and International Humanitarian Law, *op. cit.*, note 78, p. 319.

¹⁰⁸ See Article 57(2) (a) (i) Protocol I.

¹⁰⁹ SASSOLI, M., Autonomous Weapons and International Humanitarian Law *op. cit.*, note 108.

¹¹⁰ SCHARRE, P., *op. cit.*, note 21, p. 258.

In conclusion, the debate about responsibility (or lack thereof) for violations of international obligations undoubtedly becomes more intricate once IHL is under scrutiny. IHL focuses mainly on the specific characteristics of a particular action within an on-going armed conflict. In this sense, nothing prevents a particular AWS strike that may have complied with the requirements of the *ius ad bellum* from failing to comply with IHL standards once an armed conflict originates. This is especially true in the case that said UAV autonomously deviates from the pre-established operational plan resulting from a re-assessment of the specific environment (*deep learning*)¹¹¹. IHL, even if considered *lex specialis*¹¹², can be conceived within the ILC-framework, in which it operates by filling gaps and modifying the general rules on State responsibility¹¹³. This can be observed in cases where the ILC has applied the ILC-Articles in order to attribute or not attribute certain infringements of IHL to a given State¹¹⁴. An AWS could, in principle, be capable of fulfilling all the conditions of targeting law as any other lawful weapon. The emergence of an internationally wrongful act will depend on *when* and *how* the weapon was used considering the pre-assessment of the concrete circumstances and the pre-programmed response. An example of precautionary measures can be seen during the *travaux préparatoires* of the Geneva Conventions of 1949, where some delegates proposed that parties to a conflict should fit particularly dangerous weapons with safety devices “to render them harmless if they fell out of the control of the user”¹¹⁵.

3. International Human Rights Law

The final substantive area of international law that must be considered in assessing the legality of the State use of autonomous UAVs is International Human Rights Law. States and advocacy groups at the 2014 UN Convention on CCW already discussed the possible implications of AWS for IHRL and, in particular, for the right to

¹¹¹ RODRIGUEZ ALVAREZ, J. *op. cit.* note 5, p. 41-51.

¹¹² *Legality of Threat or Use of Nuclear Weapons*, Advisory Opinion, *op. cit.*, note 50, para. 25.

¹¹³ SASSOLI, M., *State Responsibility for Violations of International Humanitarian law*, *op. cit.*, note 64, pp. 403-404.

¹¹⁴ ICJ, *Nicaragua v United States*, *op. cit.* note 55.

¹¹⁵ Commentary of 1987, *op. cit.*, note 106.

life, to human dignity, to be protected against inhuman treatment, and to a fair trial¹¹⁶. There seems to be a general consensus regarding the particularity of the impact that AWS could have on the right to life if these are eventually programmed to autonomously select and neutralize targets. It is under IHRL that the right to life is most expressly protected, as set out in different international and regional human rights treaties¹¹⁷; *inter alia*, the UN International Covenant on Civil and Political Rights of 1976 (ICCPR)¹¹⁸, the American Convention on Human Rights of 1978 (ACHR)¹¹⁹, the 1970 European Convention for Human Rights and Fundamental Freedoms (ECHR)¹²⁰, as well as implicit references to human rights in humanitarian law treaties¹²¹. Individual human rights (including the right to life), enshrined in the aforementioned treaties, are seen as inherent to human nature, since the UN General Assembly (GA) proclaimed the *Universal Declaration of Human Rights* of 1948 “as a common standard of achievement for all peoples and all nations”¹²². Although it lacks binding force, it represents a “shared legal opinion of the international community” regarding the universality of the rights and obligations listed therein¹²³. In principle, IHRL is designed to apply at all times, including situations of armed conflict¹²⁴. However, this assumption is heatedly discussed in State practice; many countries fear that the simultaneous application of humanitarian and human rights law in the event of armed conflict would heavily restrict and curtail their armed forces. In this sense, it is undisputed that States may take measures to temporarily suspend their human rights obligations in case of war or other public emergency threatening their security only to the extent, and for such time, as may be necessary to prevent serious injury and to facilitate adjustment¹²⁵. While the ECHR

¹¹⁶ Chairperson of the Meeting of Experts, *op. cit.*, note 100.

¹¹⁷ HEYNS, C., AKANDE, D., HILL-CAWTHORNE, L. and CHENGETA T. *op. cit.*, note 37, p. 818.

¹¹⁸ International Covenant on Civil and Political Rights, adopted and opened for signature, ratification and accession by General Assembly resolution 2200A (XXI) of 16 December 1966 entry into force 23 March 1976, in accordance with Article 49, Article 4 para. 1.

¹¹⁹ American Convention on Human Rights, Organization of American States, Nov. 22, 1969, O.A.S.T.S. No. 36, 1144 U.N.T.S. 123, entered into force July 18, 1978, Article 27, para. 1.

¹²⁰ European Convention on Human Rights of 21 September 1970 as amended by Protocols Nos. 11 and 14 supplemented by Protocols Nos. 1, 4, 6, 7, 12, 13 and 16, Article 15, para. 1.

¹²¹ See Preamble Protocol II, Article 51, para. 1, and Article 72 Protocol I.

¹²² *The Universal Declaration of Human Rights*, UN General Assembly Resolution 217 A, 10 December 1948, Art. 3.

¹²³ MELZER, N., *Human Rights Implications of the usage of Drones and Unmanned Robots in Warfare* [online]. Homepage for the European Parliament. Directorate-General for External Policies of the Union, Policy Department, p. 18.

¹²⁴ *Id.*, p. 14.

¹²⁵ *Id.*, p. 15.

protects the right to life by a prohibition of “intentional” deprivations of life without prejudice of “lawful acts of war”¹²⁶, the ACHR and the ICCPR prohibit “arbitrary” deprivations of life with no apparent exceptions¹²⁷. This means that the permissibility of lethal force ultimately depends on what is considered to be “arbitrary”. Under IHRL any use of force has to be *necessary*, i.e. it has to be the least harmful measure to reach the legitimate objective of protecting life¹²⁸. As with IHL, necessity will be assessed on a factual basis and depending on the different available options in a given situation involving the use of AWS. Force must also be *proportionate*, i.e. “the potential harm in using force [shall] not outweigh the legitimate protective goal pursued”¹²⁹. At this point it is relevant to differentiate the proportionality principle of IHL and proportionality in terms of IHRL; in IHRL, *intentionally* lethal or potentially lethal force may be used only where strictly necessary to protect against an imminent threat to life. This means lethal AWS should only be deployed if it is clear that, by neutralizing the target, the result will be proportionally better for achieving the ultimate goal of saving lives than if the target had not been neutralized.

On the other hand, the ICJ addressed the question of applicability of IHRL by explaining that the UN Covenant’s application does not cease in wartime except for certain provisions, which may be subject to derogation in a time of national emergency (Article 4 ICCPR). However, unlike the right to privacy, freedom of movement, and the freedom of assembly, the right to life is not such a provision, i.e., “the right not arbitrarily to be deprived of one's life applies also in hostilities”¹³⁰. In a conflict of laws, IHL would nonetheless apply as *lex specialis* governing the conduct of hostilities in armed conflicts in order to define what can be understood as “arbitrary” under Article 6 ICCPR. Therefore, under the treaties, the question as to whether the use of autonomous UAVs as a means of warfare during the conduct of hostilities violates the human right to life must necessarily be determined by reference to the previously discussed IHL rules (see para. 2 of this section). At this point, it should be emphasized that not all use of force within an armed conflict must necessarily be considered as an “act of war”

¹²⁶ See Article 2, para. 1 ECHR.

¹²⁷ See Article 4, para. 2 ICCPR; Article 27, para. 2 ACHR.

¹²⁸ HEYNS, C., AKANDE, D., HILL-CAWTHORNE, L. and CHENGETA T. *op. cit.*, note 37, p. 819.

¹²⁹ *Id.*

¹³⁰ *Legality of Threat or Use of Nuclear Weapons, op. cit.*, note 50, para. 25.

governed by the law of hostilities. In its *Legal Consequences of a Wall Opinion*, the ICJ exposes three possible interaction modalities between IHL and IHRL; a) some rights may be exclusively governed by IHL; b) others may be exclusively matters of IHRL; c) yet others may be subject to both these branches of international law¹³¹. The Court continues by arguing that IHL continues to apply throughout the armed conflict as *lex specialis*, however, the specific rules governing the use of force *outside* of the conduct of hostilities derive primarily from human rights (case) law. In the *Nicaragua*¹³² and *Corfu Channel*¹³³ cases, the ICJ determined the legal base of the prohibition of murder and extrajudicial killing of persons not engaged in military hostilities, by applying “elementary considerations of humanity” enshrined in Article 3 of the Geneva Conventions I-IV¹³⁴. These provisions count as “general principles of law recognized by civilized nations” within the meaning of Article 38(1)(c) of the legally binding ICJ Statute¹³⁵. Since Article 3 of the Geneva Conventions I-IV is considered to be “even more exacting in peace than in war”, and to apply “at any time and in any place whatsoever”¹³⁶, they remain binding both extraterritorially and in situations not reaching the threshold of an armed conflict. In conclusion, the right to life under IHRL would be the “default legal norm” applicable to deaths caused by autonomous drone strikes¹³⁷. Nevertheless, the prohibition of murder and extrajudicial execution reflects a universal standard applicable whenever and wherever States resort to lethal force outside the conduct of hostilities¹³⁸, e.g., it provides the legal basis for the defence of human rights in the use of interstate force (*ius ad bellum*).

¹³¹ *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, Advisory Opinion, case nº 131, para. 106, ICJ 2004: Confirmed in; *Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda)*, Judgement, ICJ Reports, International Court of Justice (ICJ) 2005, para. 216.

¹³² ICJ, *Nicaragua v United States*, *op. cit.* note 55, para. 218.

¹³³ ICJ, *Corfu Channel case (United Kingdom v. Albania)*, Judgment of 9 April 1949 (Merits). p. 22.

¹³⁴ *Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field*, Geneva, 12 August 1949; *Convention (II) for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea*, Geneva, 12 August 1949; *Convention (III) relative to the Treatment of Prisoners of War*, Geneva, 12 August 1949; *Convention (IV) relative to the Protection of Civilian Persons in Time of War*, Geneva, 12 August 1949.

¹³⁵ United Nations, Statute of the International Court of Justice, 18 April 1946.

¹³⁶ See Article 3, para. 1 Geneva Conventions I-IV.

¹³⁷ HEYNS, C., AKANDE, D., HILL-CAWTHORNE, L. and CHENGETA T. *op. cit.*, note 37, p. 819.

¹³⁸ MELZER, N., *op. cit.*, note 124, pp. 18-19.

II. Attribution for internationally wrongful acts resulting from the State use of AWS.

The previous section focused on the (reasonably) predictable violations of international obligations in the use of AWS as a first step in fulfilling the criteria of Article 2 of the ILC-Articles. This section aims to specify the conditions under which said breaches can be attributed to the State as per the second requirement of the Draft Articles. In order to acquire a more complete vision of possible future cases of attribution of internationally wrongful acts, the relationship of international responsibility between States and international organizations (IO) will also be explored.

1. General rules on attribution of internationally wrongful acts

States are juridical abstractions that necessarily need to act through organs or agents. Article 4 of the ILC-Articles encompasses the actions of State organs, which can be attributed to the State, “whether the organ exercises legislative, executive, judicial or any other functions”¹³⁹. In this sense, the rules of attribution serve the purpose of specifying the actors whose conduct may engage the responsibility of the State, in general or specific circumstances. It is not the question to determine whether certain officials can enter into existing international obligations of the State in the first place. The only State actors that have inherent authority to bind the State are senior officials (the head of State or government, the minister of foreign affairs, and diplomats in specific circumstances)¹⁴⁰. On the other hand, other officials act upon the basis of express or ostensible authority pursuant to Article 46 of the 1969 Vienna Convention on the Law of Treaties (VCLT)¹⁴¹. Under those conditions, any State official may commit an internationally wrongful act attributable to the State, even at a local or municipal level.

¹³⁹ See Article 4 para. 1 ILC-Articles.

¹⁴⁰ CRAWFORD, J., *State Responsibility: The General Part*, Cambridge, Cambridge University Press, 2013, p. 113.

¹⁴¹ United Nations, Vienna Convention on the Law of Treaties (VCLT), Vienna 23 May 1969, Articles 53-64.

Applied to the case at hand, this would include the actions of the armed forces of a State making use of an AWS (executive power)¹⁴². In an armed conflict, a soldier is expected to apply discretion in a humane way, e.g., in face of *hors de combat*¹⁴³. Fully autonomous UAVs, on the other hand, will always pose the risk of unpredictability despite, for example, being alien to “genocidal thinking”¹⁴⁴. A good functioning of machine learning depends on its compliance with pre-specified examples of scenarios that “worked” and scenarios that “did not work”, which, as previously implied, is crucial for the establishment of a possible breach of an international obligation [see section ‘[i]us in bello’, letter e)]¹⁴⁵. If the scenario changes drastically, which is common in the course of armed conflicts, the AWS may not be able to adapt within the limits of international law¹⁴⁶. In regard to attribution, specifically, commanders will have to include a percentage of uncertainty in their calculations when deciding to deploy an AWS. Alongside traditional precautionary measures, state agents should therefore only deploy autonomous devices if their current military assessments demonstrate that the expected damage is proportionally lower than the anticipated military advantage (including the unpredictability factor)¹⁴⁷. The same would happen if a soldier were to deploy the AWS, since a “military commander is criminally responsible under the Rome Statute for crimes committed by forces under his or her effective command and control as a result of his or her failure to exercise control properly over such forces”¹⁴⁸. This individual criminal responsibility of soldiers (State officials) is the responsibility that will automatically amount to committing the controlling State under Article 4 of the ILC-Articles. This claim is also supported by Article 43(1) of Protocol I, which emphasizes the subordination of armed forces groups to a military command under a corresponding centralized State control¹⁴⁹. Hence, were a commander to use an AWS with the deliberate intention of targeting civilians and/or

¹⁴² CRAWFORD, J., *State Responsibility: The General Part*, op. cit., note 141, pp. 118-119.

¹⁴³ ICRC, Practice Relating to Rule 47. Attacks against Persons *Hors de Combat*. In: *IHL Database* [online].

¹⁴⁴ ARKIN, R. C., The Case for Ethical Autonomy in Unmanned Systems. In: *Journal of Military Ethics* [online]. Vol. 9, 2010 - Issue 4: Ethics and Emerging Military Technologies, pp. 332-341.

¹⁴⁵ Id.

¹⁴⁶ LARK, M., The Future of Killing: Ethical and Legal Implications of Fully Autonomous Weapon Systems. In: *Salus Journal* [online]. Vol. 5, Nº 1, 2017, p. 64.

¹⁴⁷ BOOTHBY, W., “Autonomous attack and the law”, in: *Some legal challenges posed by remote attack*, International Review of the Red Cross, Vol. 94, Nº 886, 2012 p. 585.

¹⁴⁸ Id., p. 590.

¹⁴⁹ See Article 43 para. 1 Protocol I.

civilian objects, the result would be the commission of a war crime just as when using conventional weapons with a similar *animus dolendi* ¹⁵⁰. Depending on the specific circumstances of each case, this criminal responsibility would amount to State responsibility, due to the aforementioned legal link between officers and the sending State. There is no war crime of failing to take precautions in attack, nevertheless, the precautionary rules of Article 57 Protocol I are largely customary and bind all States. The law does not exclude controllers of an autonomous UAV “because of the absence of a person from the cockpit”¹⁵¹. The report of the ICRC concludes that humans will always be the ones who ultimately “switch on” AWS; “that individual – and the party to the conflict – is responsible for the decision, however remote in time or space the weapon might have been deployed from the moment of the attack”¹⁵². The lack of precautionary measures can thus serve as an indicator of the attribution of responsibility of commanders for violations of IHL subsequently committed by the deployed AWS¹⁵³.

In the context of IHL, the violation of the Geneva Conventions by armed forces will always be attributable to and invoke the international responsibility of said State¹⁵⁴. Commentary on Article 4 of the ILC-Articles expounds that such responsibility is unlimited, insofar as that organ acts in an official capacity¹⁵⁵. However, as noted by the ICJ in the *Armed Activities case*, “it is irrelevant for the attribution of their conduct ... whether the [personnel] acted contrary to the instructions given or exceeded their authority”¹⁵⁶. The disobedience of instructions given by a commander (*ultra vires*) would, hence, still entail the attribution of the acts of a soldier in relation to the deployment of an AWS even when the forces in question are no longer under State command. Depending on the circumstances, it could be argued that it is unnecessary for an individual to act as a *direct* perpetrator of the internationally wrongful act. A precedent can be found in the *Corfu Channel* case, where Albania was held responsible

¹⁵⁰ See Article 8(2)(b)(i) of the Rome Statute of the International Criminal Court, 1998.

¹⁵¹ BOOTHBY, W., *op. cit.*, note 148, p. 584.

¹⁵² KELLENBERGER, J., International Humanitarian Law and New Weapon Technologies. In: *34th Round Table on Current Issues of International Humanitarian Law*, San Remo, Italy, 2011, p. 816.

¹⁵³ BOOTHBY, W., *op. cit.*, note 148, p. 590.

¹⁵⁴ See Article 91 Protocol I.

¹⁵⁵ International Law Commission, Report of the Commission to the General Assembly on the work of its fifty-third session. In: *Yearbook Of The International Law Commission*. United Nations, New York and Geneva, 2007, pp. 40-42.

¹⁵⁶ *Armed Activities on the Territory of the Congo*, *op. cit.*, note 132.

for unlawful acts committed by an “unnamed third party” (presumably Yugoslavia) due to its officials’ knowledge at the time and their inaction in the face of the obvious danger posed by certain operations. This reflects a possible omission, which could be internationally wrongful (Article 2 ILC-Articles), e.g., by failing to warn of a defective AWS or its inherent limitations.

Concerning *ius ad bellum*, if a State agent decides to make use of an autonomous drone (and all it entails) and violates the territorial integrity of another State, such conduct would be directly attributable to the State they represent. An example of this can be found in the *Rainbow Warrior* case, where France was found responsible for the violation of New Zealand’s national sovereignty committed by the French Directorate General of External Security (executive power)¹⁵⁷. The principles of attribution of the law of State responsibility can help provide a basis for the scope of the primary obligation of States to refrain from using or threatening to use force against other States¹⁵⁸. It is worth remembering the fact that the prohibition is an integral part of the primary source of international law – the UNC – dedicated to the maintenance of “International Peace and Security”¹⁵⁹. This is particularly important in view of Article 59 of the ILC-Articles, which states that its application will be “without prejudice to the Charter of the United Nations” and guarantees its concordance with Article 103 UNC and, hence, the mandate of the SC in virtue of Chapter VII UNC¹⁶⁰. The fact that States are required to inform the SC and that the latter is the organ in charge of judging the necessity and proportionality of said State’s use of UAVs in self-defence inherently reflects the accountability of said State towards the SC. This is ultimately at the discretion of the SC according to the primary rules of the law of force, i.e., Chapter VII of the UNC. Although the attribution of inter-state force may seem obvious from the “state-centric” conception of Article 2(4) UNC¹⁶¹, States are ultimately corporate

¹⁵⁷ *Case concerning the differences between New Zealand and France arising from the Rainbow Warrior affair*, Arbitral Award, 74 ILR 256, Secretary-General of the United Nations 1986.

¹⁵⁸ NOLLKAEMPER, A., *The Security Council and the Use of Force: Theory and Reality, a Need for a Change?*, Amsterdam, Martinus Nijhoff, 2005, p. 169.

¹⁵⁹ See Article 1 and Chapter VII Charter of the United Nations.

¹⁶⁰ See Article 59 ILC-Articles.

¹⁶¹ TRAPP, K. N., Actor-Pluralism, the ‘Turn to Responsibility’ and the Jus Ad Bellum: ‘Unwilling or Unable’ in Context. In: *2 Journal on the Use of Force and International Law*, Faculty of Laws, UCL, 8 August 2015, p. 133-171.

entities that inevitably need the intermediate involvement of natural persons¹⁶². “Attribution”, in the sense of the ILC-Articles, generally establishes “whether the conduct of a natural person or other such intermediary can be considered an act of State and thus be capable of giving rise to State responsibility”¹⁶³. Because IHL addresses individuals, the attribution of the behaviour of certain persons to a State can become clearer. Nevertheless, the general rules also apply to the *ius ad bellum*, in case individuals covered by the ILC-Articles conduct the illegitimate use of force.

Outside the conduct of military hostilities, the idea that the law of State responsibility and IHRL are mutually reinforcing has been widely recognized by international human rights bodies¹⁶⁴. As with the other substantive law bodies, when a State violates its human rights obligations pursuant to subscribed human rights treaties, State responsibility is established “as immediately as between the two [or more] States”¹⁶⁵. This translates into the emergence of State responsibility as an automatically arising consequence of the breach of IHRL by State organs – irrespective of whether or not a victim seeks a remedy for the damage or harm suffered. The right to life, concretely, is often described as the “supreme right” as certain violations thereof may also lead to individual responsibility for the commission of war crimes or crimes against humanity¹⁶⁶. An example of the application of Article 4 of the ILC-Articles can be seen in cases where the UN Human Rights Committee (HRC) attributed violations of the ICCPR to central governments, municipal authorities, police and security forces and several types of State organs¹⁶⁷. IHRL is legally binding for States to the extent that

¹⁶² CRAWFORD, J., *State Responsibility: The General Part*, *op. cit.*, note 141, p. 113.

¹⁶³ Id.

¹⁶⁴ *Humberto Menanteau Aceituno and Mr. José Carrasco Vasquez (represented by counsel Mr. Nelson Caucoto Pereira of the Fundación de Ayuda Social de las Iglesias Cristianas) v. Chile*, Communication No. 746/1997, U.N. Doc. CCPR/C/66/C/746/1997, para. 5.4, Human Rights Committee (HRC) 1999; Inter-American Commission on Human Rights (IACHR), *Alejandro et al. v. Cuba*, case No. 11.589, Report No. 86/99, paras. 37, 45, Inter-American Commission on Human Rights (IACHR) 1999; European Court of Human Rights (ECHR), *Bankovic and others v. Belgium and 16 other Contracting States*, Application No. 52207/99, Admissibility Decision, paras. 74-76, European Court of Human Rights (ECHR) 2001.

¹⁶⁵ *Phosphates in Morocco (Italy v France)*, General List No. 71, Judgment No. 28, para. 48, ICJ 1938.

¹⁶⁶ UN Human Rights Committee (HRC), General Comment No. 6: Article 6 (Right to Life), 1982, para. 1.

¹⁶⁷ WEWERINKE-SINGH, M., “State Responsibility for Human Rights Violations Associated with Climate Change”, in DUYCK, S., JODOIN, S. and JOHL, A. (eds.), *Handbook on Human Rights and Climate Governance*, Leiden, Routledge, 2017, p. 5.

their agents “exercise physical power, authority or control over individuals”¹⁶⁸. This further reinforces that violations of the right to life should be attributed to those commanders or officials who decide to use autonomous UAVs outside of an armed conflict irrespective of territorial considerations. As such, IHRL becomes the “default legal norm” for the protection of AWS strike victims¹⁶⁹. However, it must be admitted that few human rights cases have suggested that a State’s human rights obligations may be violated through the extraterritorial use of military force regardless of personal custody, which could be particularly relevant for cross-border AWS strikes¹⁷⁰.

In general terms, a State is not responsible for the acts of private individuals unless it is exercising *effective control* over such actors (Article 8 ILC-Articles)¹⁷¹ or ratifies their acts as its own (Article 11 ILC-Articles)¹⁷². The ICJ has often applied a strict “effective control test” under Article 8 ILC-Articles by reducing it to the cases where the State was in “direction or control [of] the specific operation and the conduct complained of was an integral part of that operation”¹⁷³. It has to be a significant level of control, reflected, *inter alia*, in the dependence of the individual(s) to the State, and the State “direction or enforcement” of the former to achieve an operational objective¹⁷⁴. This happens if, e.g., commanders recruit and train private actors to deploy UAVs within a State-led operation. Said training could be crucial to carry out a State-led operation that may result in civilian losses, especially if just a few States own the required technology. If the individuals infringe IHL rules during the course of said operation, the ‘controlling’ State could be held responsible for the breach of its international obligations¹⁷⁵. After all, the *raison d’être* of the ILC-Articles is to prevent States from hiding unlawful practices behind unofficial forces.

2. State organs and international organizations

¹⁶⁸ MELZER, N., *op. cit.*, note 124, p. 17.

¹⁶⁹ HEYNS, C., AKANDE, D., HILL-CAWTHORNE, L. and CHENGETA, T., *op. cit.*, note 37, p. 819.

¹⁷⁰ MELZER, N., *op. cit.*, note 124, p. 17.

¹⁷¹ CRAWFORD, J. and OLLESON, S., “The Nature and Forms of International Responsibility”. In: Malcolm D. Evans, *International Law*, 5th. ed., Great Britain, Oxford University Press, 2003, p. 457.

¹⁷² *United States Diplomatic and Consular Staff in Tehran*, Judgement, p. 3, paras. 73-74, CJ 1980.

¹⁷³ *Yearbook Of The International Law Commission*, *op. cit.*, note 156, p. 47.

¹⁷⁴ ICJ, *Nicaragua v United States*, *op. cit.* note 55, p. 51, para. 86.

¹⁷⁵ *Yearbook Of The International Law Commission*, *op. cit.*, note 174.

It is worthwhile to contrast the responsibility regime applicable to the organs of State by virtue of Article 4 ILC-Articles with the law of International Organizations of which these States are a member. This is due to the potential future relevance of IOs, such as the UN or the North Atlantic Treaty Organization (NATO) in the field of AWS, which, like States, cannot carry out their activities without the intermediate participation of natural persons. These persons may sometimes be part of the IO's staff, but it is not unusual for such entities to "borrow" the organs of one or several of its contributing MS¹⁷⁶. The ILC-Articles do not provide a definition of the relationship of international responsibility between States and IOs, but it does mention; "[the] articles are without prejudice to any question of the responsibility under international law of an international organization, or of any State for the conduct of an international organization"¹⁷⁷. The controversial nature of the issue - as it indirectly questions the reliability and proper functioning of IOs - lead to the Commission's decision to refer these questions to its 2011 *Draft Articles on the Responsibility of International Organizations* (DARIO)¹⁷⁸. Like the ILC-Articles on State responsibility, the DARIO does not in principle address primary rules, which determine whether an IO is bound to a specific international obligation, rather it provides the secondary legal basis for establishing the consequences of the breach of the obligations they pledged to fulfil¹⁷⁹. In order to delimit the scope of the Draft, DARIO Article 2 defines international organizations as those entities "possessing [their] own [separate] international legal personality", which implies that the IOs' acts may not automatically give rise to responsibility of their MS and vice versa¹⁸⁰. In order to identify the difference between the State's responsibility and that of IOs, prominent international jurisprudence resorts to the standard of 'effective control' pursuant to DARIO Article 7, which has evolved from its first use in the *Nicaragua* case (see para. 1 of this section)¹⁸¹. The DARIO Commentary of Article 7 states that the criterion for attribution of conduct focuses "on the factual control that is exercised over the specific conduct taken by the organ or agent

¹⁷⁶ CRAWFORD, J., *State Responsibility: The General Part*, *op. cit.*, note 141, pp. 188-189.

¹⁷⁷ See Article 57 ILC-Articles.

¹⁷⁸ ILC, *Draft articles on the responsibility of international organizations* (DARIO), 2011. Adopted by the International Law Commission at its sixty-third session, in 2011, and submitted to the General Assembly as a part of the Commission's report covering the work of that session (A/66/10, para. 87).

¹⁷⁹ GAJA, G., *Articles on the Responsibility of International Organizations*. In: *Audiovisual Library of International Law* [online]. New York: United Nations, Law of International Relations, 9 December 2011.

¹⁸⁰ See Article 2 (a) DARIO.

¹⁸¹ ICJ, *Nicaragua v United States*, *op. cit.* note 55.

placed at the receiving organization's disposal"¹⁸². As demonstrated in the *Al-Jedda v. the United Kingdom* case before the ECHR, where the UN was found not to be responsible for the acts of the 'Multi-National Force', formed by the UK and the US, in Iraq¹⁸³. Even though the US had been asked to periodically report the UNSC about their activities, "the United Nations did not, thereby, assume any degree of control over either the force or any other of the executive functions of the Coalition Provisional Authority"¹⁸⁴. However, regarding the application of DARIO Article 7, it is equally true that responsibility may be jointly attributed to both States and IOs; "dual or even multiple attribution of conduct cannot be excluded"¹⁸⁵. In this sense, the attribution of certain behaviour to an IO does not necessarily preclude the attribution of the same conduct to a MS and vice-versa. If conduct was originally attributed to a MS, in principle, nothing prevents the same conduct being attributed to the IO¹⁸⁶. The crux of this reasoning is the concept of *actual* and *positive* control over the acts in question based on the agreed upon relationship of authority and command between MS and the specific IO. This goes beyond the unrefined question, "who gave the orders?"¹⁸⁷. Instead, it focuses on the "command and control authority and responsibility with which the entity was endowed" and analyses the *de facto* actions in order to find out which of the two entities – the IO or the MS – was positioned to have acted differently in the specific context in a way that would have avoided the alleged misconduct¹⁸⁸. In the *'Nuhanović and Mustafić v. Netherlands cases (Dutchbat)*¹⁸⁹, the Dutch Court of Appeal stated that the level of influence of a MS (in this case; Netherlands) over its peacekeepers can be a strong indicator of its position of effective control over the actions of said personnel, and more specifically, the MS could have used said effective control to prevent international law violations from happening. This decision was based on the *rationale* that acts should be attributed to the MS or IO that is best (legally) positioned to prevent them. In the case where a UAV caused civilian losses within the scope of a peacekeeping mission led by an international organization, the legal control of

¹⁸² ILC, *Draft articles on the responsibility of international organizations, with commentaries*, 2011, Article 7, para. 4.

¹⁸³ *Al-Jedda v. the United Kingdom*, European Court of Human Rights, Grand Chamber, Application no. 27021/08, Judgement, Strasbourg, 7 July 2011.

¹⁸⁴ *Id.*, para. 80.

¹⁸⁵ ILC, *Draft articles on the responsibility of international organizations, with commentaries, op. cit.*, note 179, Chapter II, para. 4.

¹⁸⁶ *Id.*

¹⁸⁷ CRAWFORD, J., *State Responsibility: The General Part, op. cit.*, note 141, pp. 190-191.

¹⁸⁸ *Id.*

¹⁸⁹ *Nuhanović v. The Netherlands*, ECLI:NL:GHSGR:2011:BR5388, 200.020.174/01, GHSGR 2011: *Mustafić-Mujić et al v. The Netherlands*, ECLI:NL:GHSGR:2011:BR5386, 200.020.173/01, para. 3.10.2, Gerechtshof 's-Gravenhage (GHSGR) 2011.

the contributing MS over its personnel at the time of the alleged infringement should first be examined. This will determine its capacity to prevent internationally wrongful acts from occurring (DARIO Article 7). Despite being an area undergoing continuous development, the general intention of predominant international jurisprudence is notable. Specifically, it aims to prevent States from hiding behind international organizations to commit internationally wrongful acts. This reasoning has been gaining importance primarily in tackling possible cases of MS impunity, but it has also opened the possibility of attribution of internationally wrongful acts to IOs in a centralized manner, or as multiple responsibility encompassing both separate entities¹⁹⁰.

III. Responsibility for breaches of collective obligations

As has been briefly mentioned throughout this thesis, all three analysed substantive international law corpuses –*ius ad bellum*¹⁹¹, IHL and IHRL – entail, what the ILC-Articles define as *collective obligations* – also referred to as obligations *erga omnes*¹⁹². These types of international obligation are characterized by the fact that they are due to all recipient States of such obligations, whether a limited group of States or the entire international community as a whole¹⁹³. These are obligations that, in principle, cannot be subdivided into several bilateral relations, but rather are obligations of a communitarian nature. Furthermore, its compliance does not depend on the compliance of other States, since there is no reciprocity to achieve the objectives set by either multilateral treaties or by general international law¹⁹⁴. However, as will be seen below, its non-compliance produces specific legal effects both for given groups of States and/or for the international community as a whole, depending on the type and origin of the breached obligation.

1. Invocation of responsibility for the breach of obligations *erga omnes* and *erga omnes partes*

¹⁹⁰ BOON, K. E., Supreme Court Decision Rendered in Dutchbat Case: the Netherlands Responsible. In: *Opinio Juris* [online]. [USA]: 6 September 2013.

¹⁹¹ International Law Commission, Report on the work of the seventy-first session (A/74/10), 2019, pp. 173-177.

¹⁹² *Yearbook Of The International Law Commission*, *op. cit.*, note 156, p. 118, para 11.

¹⁹³ CASANOVAS, O., “Obligaciones de Estructura Integral”, in: CASANOVAS, O. and RODRIGO, A. J. (eds.), *Compendio de Derecho Internacional Público*, Madrid, Editorial Tecnos, 2019, pp. 60-62.

¹⁹⁴ *Id.*

It has to be noted that, as of today, no complete agreement has been reached on the enumeration of communitarian norms, since this area of international law is still developing. Nevertheless, it has been long accepted that States should have standing to protest breaches of certain fundamental norms, and should also, if necessary, be entitled to initiate legal proceedings in that respect¹⁹⁵. Article 48 of the ILC-Articles provides the legal coverage inherited from the *Barcelona Traction* case for such actions by stating that “[a]ny State other than an injured State is entitled to invoke the responsibility of another State”¹⁹⁶. This is the case if the following non-cumulative conditions exist; a) the obligation breached has its origin in a multilateral treaty between a group of States – among which is the complaining State – and said obligation was established to protect a collective interest of the group (obligations *erga omnes partes*)¹⁹⁷; or b) “the obligation breached is owed to the international community as a whole” (obligations *erga omnes*)¹⁹⁸. This provision is in concordance with Article 42 of the Draft Articles about the “[i]nvocation of responsibility by an injured State”¹⁹⁹. Hence, in the case of obligations *erga omnes partes* every State party to a multilateral treaty has a procedural right to invoke responsibility on behalf of all other State parties, whereas obligations *erga omnes* enables every State to invoke responsibility on behalf of the international community as a whole.

In the case of the *ius ad bellum*, the ban on the use of force in Article 2(4) UNC, which reflects the prohibition of aggression, is certainly one of the provisions that is most widely accepted and recognized as belonging to the universally binding norms of *ius cogens* that generate obligations *erga omnes*²⁰⁰. On the one hand, this is due to the universality of the Charter, which already reflects unanimity among States in recognising and treating the norm of general international law as a *peremptory norm* from which no derogation is permitted. On the other hand, it reflects and protects fundamental values of the international community, which are hierarchically superior to

¹⁹⁵ CRAWFORD, J., *State Responsibility: The General Part*, *op. cit.*, note 141, pp. 362-375.

¹⁹⁶ See Article 48, para. 1 ILC-Articles: *Case Concerning the Barcelona Traction, Light and Power Company, Limited (Belgium v. Spain)*, ICJ 1964.

¹⁹⁷ See Article 48, para. 1 (a) ILC-Articles.

¹⁹⁸ See Article 48, para. 1 (b) ILC-Articles.

¹⁹⁹ See Article 42 (b) ILC-Articles.

²⁰⁰ DOMINICÉ, C., ‘The International Responsibility of States for Breach of Multilateral Obligations’. In: *EJIL*, 1999, Vol. 10 Nº 2, pp. 353–363, p. 355: *Yearbook Of The International Law Commission*, *op. cit.*, note 162, para. (5) of the commentary to Article 26, p. 85.

other rules of international law, i.e. the principle of equal sovereignty of States²⁰¹ serving the broader purpose of the ‘maintenance of international peace and security (Article 1.1 UNC)²⁰².

Treaty systems for Human Rights protection are also among the most typical examples of binding peremptory norms. The right to life concretely, is considered the most fundamental human right and “is recognized as forming part of *ius cogens* and entailing, on the part of States, obligations *erga omnes* toward the international community as a whole”²⁰³. The aspiration towards universality in the protection of Human Rights is reflected in Article 1 of the UNC; “promoting and encouraging respect for human rights and for fundamental freedoms”²⁰⁴; and the Universal Declaration of Human Rights by stating that “[e]veryone is entitled to all the rights and freedoms...without distinction of any kind”²⁰⁵. On a regional level, it can be seen how the conception, legalisation and guarantee of Human Rights may vary between the European system, the inter-American system and the African system²⁰⁶. Nevertheless, the ACHR and the ECHR for example, were conceived to complement and specify the rights contained in the universal treaties, creating corresponding obligations *erga omnes partes* among the group of contracting MS; fostering compatibility between universality and regionalization and conferring greater protection (although sometimes redundant) of the human person regardless of nationality²⁰⁷.

Contemporary IHL was prompted by the progressive process of humanization

²⁰¹ See Article 1, para. 2 Charter of the United Nations.

²⁰² Report of the International Law Commission on its Seventy-first session, 29 April–7 June and 8 July–9 August 2019. In: General Assembly Official Records, Supplement Nº 10 (A/74/10), Chapter IV, p. 142: See Article 53 of the 1969 Vienna Convention: ICJ, (*Democratic Republic of the Congo v. Uganda*), *op. cit.*, note 132, p. 168: ICJ, *Nicaragua v United States*, *op. cit.* note 55, p. 14.

²⁰³ RIBERO, A.V., Report on the Implementation of the Declaration on the Elimination of All Forms of Intolerance and of Discrimination Based on Religion or Belief, 1987, (E/CN.4/1987/35).

²⁰⁴ See Article 1, para. 4 Charter of the United Nations.

²⁰⁵ *The Universal Declaration of Human Rights*, *op. cit.*, note 123, Art. 2.

²⁰⁶ See Article 1 ECHR; Article 2, para. 1 ICCPR; Article 1, para. 1 ACHR. The only exception is the African Charter, which establishes an unlimited obligation of the contracting states to “recognize” and to “adopt legislative or other measures to give effect to” the rights, duties and freedoms enshrined in the Charter, Article 1 African Charter on Human and Peoples Rights (ACHPR).

²⁰⁷ SERRANO, S. and VÁZQUEZ, D., “Fundamentos teóricos de los derechos humanos. Características y principios”, in: MEDELLÍN URQUIAGA, X. M., FAJARDO MORALES, Z. A., SERRANO, S., RAMÍREZ DAGIO, R., ROSALES ZARCO, H., BURGOS MATAMOROS, M., VÁZQUEZ, D. and FLORES LLANOS, F. U. (eds.), *Fundamentos Teóricos de los derechos humanos*, Mexico D.F., Comisión de Derechos Humanos del Distrito Federal, 2011, p. 224.

of international law marked by the adoption of the 1949 Geneva Conventions, further developed by Protocol I, which are applicable as a matter of customary international law irrespective of reciprocity²⁰⁸. Special Rapporteur *Crawford* states that “the humanitarian norms under the Geneva Conventions are characterized as *erga omnes partes*”²⁰⁹, however, there is some general disparity to be observed in State practice and international jurisprudence regarding the type of obligations derived from IHL-treaties. According to common Article 1 of the 1959 Geneva Conventions; “[t]he High Contracting Parties undertake to respect and to ensure respect” for the 1949 Geneva Conventions “in *all* circumstances”. This provision –read with Protocol I –is envisaged to be part of customary law²¹⁰, which, according to some scholars, asserts that the 1949 Geneva Conventions embody both *erga omnes* and *erga omnes partes* obligations simultaneously²¹¹. This interpretation was seconded in the *Wall* opinion, where the ICJ highlighted the consequences of Israeli violations of certain obligations *erga omnes* by invoking Article 1 of the 1949 Geneva Conventions²¹². Stating thus that *all* States have a legal interest in other States’ compliance with the rules enshrined in the conventions beyond a *stricto sensu* regime of reciprocity. Furthermore, in its advisory opinion on the *Legality of the Threat or Use of Nuclear Weapons*, the ICJ decided that “because a great many rules of humanitarian law applicable in armed conflict are so fundamental to the respect of the human person and ‘elementary considerations of humanity’... they constitute *intransgressible* principles of international customary law”²¹³. On the other hand, in the *DRC v. Uganda*, Judge *Simma* invoked Article 1 of the 1949 Geneva Conventions in his Separate Opinion to assert that every State party to IHL Conventions

²⁰⁸ LONGOBARDO, M., The Contribution of International Humanitarian Law to the Development of the Law of International Responsibility Regarding Obligations *Erga Omnes* and *Erga Omnes Partes*. In: *Journal of Conflict and Security Law*, [online]. [United Kingdom]: University of Westminster, Nº 23, 2018, p. 11.

²⁰⁹ CRAWFORD, J., *State Responsibility: The General Part*, *op. cit.*, note 141, p. 378-380.

²¹⁰ See Article 1, para. 1 Protocol I: DOSWALD-BECK, L. and HENCKAERTS, J. M., “Chapter 41, Enforcement of International Humanitarian Law”, in: DOSWALD-BECK, L. and HENCKAERTS, J. M. (eds.), *Customary International Humanitarian Law*, Vol. 1: Rules, Cambridge, International Committee of the Red Cross, 2005, p. 509.

²¹¹ LONGOBARDO, M., *op. cit.*, note 209, p. 12.

²¹² *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, *op. cit.*, note 132, Nº 29, paras. 158-159.

²¹³ *Id.*

can make a claim before the ICJ²¹⁴. This affirmed the ICJ's jurisdiction on obligations *erga omnes partes* and was subsequently reaffirmed by the ICJ in the *Belgium v. Senegal* case²¹⁵.

This demonstrates that States making use of AWS for military purposes will have to keep two possible scenarios in mind: 1) said devices will necessarily be involved in controversies about the possible violation of principles of international law reflected in the three branches of international law examined in this paper, and 2) the State parties to the treaty that contains said basic rules and/or all States that conform the international community, if applicable, may invoke responsibility of those States for damages caused by AWS under the supervision of their military personnel. Regardless of whether obligations are considered as *erga omnes* or *erga omnes partes*, the invocation of responsibility for damages derived from UAV strikes may be carried out by countries other than the directly injured State²¹⁶, in defence of collective interests, such as international peace and security, territorial sovereignty of States, and the defence of Human Rights; both within and outside of armed conflicts.

2. Serious breaches of obligations under peremptory norms

The fact that the *ius ad bellum*, *ius in bello* and IHRL contain rules of *ius cogens*²¹⁷ may lead to the application of a specific regime of *aggravated responsibility*; if States commit serious breaches of *erga omnes* obligations under peremptory norms (Part Two, Chapter III of the ILC-Articles). At this point it is convenient to remember that, while every *ius cogens* norm produces obligations *erga omnes*, not every obligation *erga omnes* is a norm of *ius cogens*. In this sense, peremptory law limits itself to designating the hierarchy between rules, while the concept of obligations *erga omnes* (as mentioned above) primarily aims to identify the corresponding holders of the

²¹⁴ *Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda)*, *op. cit.*, note 132, pp. 168, 242, International Court of Justice (ICJ) 2005, Separate Opinion of Judge Simma, para 37.

²¹⁵ ICJ, *Questions Relating to the Obligation to Prosecute or Extradite (Belgium v. Senegal)* (Judgment), 2012, ICJ Reports, Section II.

²¹⁶ See Article 42 (b) ILC-Articles.

²¹⁷ International Law Commission, Report on the work of the seventy-first session (A/74/10), 2019, p. 147.

involved legal interests, i.e. a group of States or the international community as a whole²¹⁸. This differentiation is important in order to determine the legal effects of the hierarchically superior peremptory norms regarding the validity and termination of other international treaties, which, according to Article 53 of the VCLT will inevitably lead to the voiding of those treaties that conflict with the given *ius cogens* norm²¹⁹. For the aggravated regime of responsibility to apply, the first qualitative criterion must be met; there must be a violation of a peremptory norm of general international law (Article 40(1) ILC-Articles). In the case at hand, this would entail the prohibition of certain behaviours that pose a threat to international peace, human life, physical integrity, and dignity of peoples and individuals. The second criterion is of a quantitative nature; the violation has to be grave (Article 40(2) ILC-Articles). The qualitative “seriousness” of the breach is achieved if the State flagrantly or systematically jeopardizes the most basic values protected by the peremptory norm in question²²⁰. The Commission was nevertheless rigorous in refraining from giving any indication that could imply the applicability of *one single* regime of responsibility for all serious internationally wrongful acts²²¹: “international wrongs assume a multitude of forms and the consequences they should entail in terms of international responsibility are certainly not reducible to one or two uniform provisions”²²². The Draft Articles leave the question open and merely indicate that the legal consequences provided for by Chapter III will apply “without prejudice to the other consequences” provided by the ILC-Articles in ‘Part Two’ and the specific applicable rules of international law, i.e. *ius ad bellum*, the law of armed conflict and IHRL²²³. The ILC thus leaves open the possibility for a particular rule to prescribe its own special consequences in the event of a breach. This is particularly true for the attributed consequences of the illegitimate use

²¹⁸ LONGOBARDO, M., *op. cit.*, note 209, p. 5.

²¹⁹ See Articles 53-64 VCLT.

²²⁰ CASANOVAS, O., “Las Violaciones Graves de Obligaciones Derivadas de Normas Imperativas de Derecho Internacional General”, in: CASANOVAS, O. and RODRIGO, A. J. (eds.), *Compendio de Derecho Internacional Público*, Madrid, Editorial Tecnos, 2019, pp. 559- 561.

²²¹ CRAWFORD, J., State Responsibility. In: *First report on State responsibility, by Mr. James Crawford, Special Rapporteur*, 24 April, 1, 5, 11 and 26 May, 22 and 24 July, 12 August 1998 (A/CN.4/490 and Add. 1-7), p. 17, para. 67.

²²² International Law Commission, Documents of the twenty-eighth session (excluding the report of the Commission to the General Assembly). In: *Yearbook Of The International Law Commission*, Vol. II, Part one, A/CN.4/SER.A/1976/Add.1 (Part 1). United Nations, New York and Geneva, 1976, p. 117, para. 53 of the commentary to article 19.

²²³ See Article 41, para. 3 ILC-Articles.

of inter-State force pursuant to Article 2(4) and Chapter VII of the UNC (see section II. 1)²²⁴. Hence, if there is no other applicable norm, the general consequence that the Draft Articles foresee is the abandonment of sanctioning conceptions beyond the provided general consequences related to the responsible State, i.e. Cessation and non-repetition [Article 30 a)] and reparation (Article 31)²²⁵. Inspired by the general objective of encouraging States to fulfil their international obligations, the consequences foreseen in this aggravated regime of responsibility – so-called “obligations of solidarity” – are addressed rather to the other States of the international community²²⁶.

If an AWS commits a serious breach of one of the previously analysed peremptory norms within the *ius ad bellum*, IHL and IHRL, it is therefore to be expected that the rest of the international community adopts a specific conduct towards the State whose armed forces were in control of said device²²⁷. There is an obligation of a positive nature imposed on the other States, to actively put an end, by lawful means, to the serious violations of obligations *erga omnes*; whereas, from a negative perspective, States will have to refrain from recognizing the resulting situation as lawful²²⁸.

IV. The role of international judicial bodies

The invocation of international responsibility within the aggravated responsibility regime obeys, in principle, the same requirements as in the general regime. These are; the presentation of a claim directly against another State or through the initiation of proceedings before an international tribunal; the duty to notify the claim to the responsible State (Article 43.1 ILC-Articles); and the possibility for legitimized States – the injured State, State parties to a treaty other than the injured State or the international community as a whole²²⁹ – to specify the behaviour that the responsible State should observe to put an end to the wrongful act, if it continues, as well as the determination of

²²⁴ See Articles 55 and 59 ILC-Articles.

²²⁵ See Part Two, Chapter I (“General Principles”) ILC-Articles.

²²⁶ CASANOVAS, O., “Las Violaciones Graves de Obligaciones Derivadas de Normas Imperativas de Derecho Internacional General”, *op. cit.*, note 221, p. 563.

²²⁷ See Article 41, para. 1 ILC-Articles.

²²⁸ See Article 41, para. 2 ILC-Articles.

²²⁹ See Article 42 ILC-Articles.

the corresponding reparation (Article 43.2 ILC-Articles)²³⁰. Hence, for the offending State to be held liable for violations of international law committed by its AWSs, there must be a forum to which it answers and through which legitimized States or individual victims themselves may challenge said behaviour. Whether the ICJ could be the forum for AWS-related interstate disputes constitutes the focus of this section.

Although the ICJ is not the only international tribunal for the resolution of inter-state disputes, other international bodies will not be investigated here. In the case of the World Trade Organization's (WTO) Dispute Settlement Body, this is because it primarily focuses on trade-related disagreements, thus leaving disputes over AWS crimes, such as human rights violations or the breach of IHL-rules, outside their jurisdiction²³¹. The International Criminal Court only has jurisdiction over individuals, which would deviate from the object of study of this paper²³². The ICJ on the other hand, primarily focuses on the dispute settlement between States, making it thus the theoretically ideal forum to entertain AWS-related legal controversies between the alleged offending State and other States on behalf of their citizens affected by State-led AWS strikes, or on behalf of the entire international community. However, the enforceability of State responsibility for internationally wrongful acts committed by AWS could be hampered if both parties have not given their consent for the Court's authority. This consent can be expressed through an international agreement containing a specific provision that enables them to resort to the ICJ for the settlement of disputes. Other ways to give consent to ICJ adjudication include the formal acceptance of the Court's jurisdiction as mandatory when confronting another UN MS via a declaration with the Secretary General and the signing of a separate agreement to submit an existing dispute to the ICJ. According to *Hammond*, these mechanisms could face some difficulties when dealing with AWS crimes, since the main treaties that contain the legal basis for IHL or IHRL violations "do not require dispute resolution in the ICJ"²³³. It has to be noted that these obstacles are nevertheless not to be attributed to the AI

²³⁰ CASANOVAS, O., "Las Violaciones Graves de Obligaciones Derivadas de Normas Imperativas de Derecho Internacional General", *op. cit.*, note 221, pp. 561-562.

²³¹ World Trade Organization, Understanding On Rules And Procedures Governing The Settlement Of Disputes (DSU), Annex 2 of the WTO Agreement.

²³² ICJ, Rome Statute of the International Criminal Court, 17 July 1998, in force on 1 July 2002, United Nations, Treaty Series, vol. 2187, Nº 38544, Article 25.

²³³ HAMMOND, D. N., 'Autonomous Weapons and the Problem of State Accountability'. In: *Chicago Journal of International Law* [online]. [United States] : 2015; 15, 2; ProQuest, Vol. 15, Nº 2, p. 679.

phenomenon *per se*, but this is a limitation that is inherent to the major IHL and IHRL Conventions, which explains why the ICJ has only rendered few decisions regarding IHL²³⁴. The conclusions to be drawn from this are; a) the ICJ's mandate would cover *ratio materiae* disputes between States for the commission of internationally wrongful acts by AWS; b) whether the case will actually go to court will depend largely on the proactive attitude of States in regards to the international jurisdiction of the ICJ. States are very likely to be reluctant to freely submit disputes to the Court, however, as has been seen in ICJ case law on IHL and IHRL²³⁵, those cases where the Court does rule could be vital for the substantive development of international law in response to new challenges posed by AWS.

D. Conclusion

The applicability of the ILC-Articles to internationally wrongful acts resulting from the State use of AWS has been proven by the present study; however, the intricacy of this type of legal operation should not be underestimated, as there is a general lack of legal provisions that specifically address AI. Social reality being more advanced than international regulations is nothing new; Law, in general, has had to adopt a rather reactive approach to the great changes and events within the international system. Examples of this approach can be seen with the development of nuclear weapons, the growing threat posed by non-state actors, cyberspace etc.. It could thus be argued that AI is nothing more than the next inevitable step in a race for more sophisticated warfare technology, which will have to be addressed by existing or, perhaps, future specific international law provisions. The ILC-Articles, although considered part of soft-law, acquire great relevance as one of the most complete compilations of general international law specifically addressing the establishment and consequences of State responsibility for the breach of its international obligations.

²³⁴ Id., p. 678.

²³⁵ CHETAIL, V., 'The Contribution of the International Court of Justice to International Humanitarian Law'. In: *International Review of the Red Cross* (IRRC), 2003, Vol. 85, Nº 850, pp. 267-268.

The reason behind the resort to this particular responsibility regime for internationally wrongful acts committed by AWS is twofold; firstly, the cutting-edge technology discussed in this paper is surprisingly unknown outside the technology-development circles of most advanced countries. Secondly, the complexity of these autonomous systems requires the intervention of various actors, whether in their manufacture, commercialization or inclusion in military operations, which may result in ambiguities regarding the attribution of responsibility. In regards to the former, at the end of the day, the step towards autonomy of AI systems continues to be a project under study where great secrecy reigns. In this sense, it is still too early to be able to reach exact conclusions about the level of autonomy that these systems will really possess and the associated problems that will have to be addressed by international legislators. Based on this unavoidable unknown, the guidelines of the ILC-Articles become very convenient because they focus on a sufficiently well-known international actor, the State, rather than on specific weapons of which sufficient, precise information is not yet available. That will be the duty of specific laws on artificial intelligence as means of force. The second reason behind the application of the ILC-Articles to the case at hand is one in line with some AWS-sceptics; the chain of interveners in the development and use of autonomous systems is too long to be able to establish a single comprehensive system of responsibility adjudication between, e.g. software programmers, military personnel, weapons reviewers, and political leaders. Although this fact does not imply that such a legal system may not be developed in the future, what is certain is that this system does not yet exist in relation to AWS crimes. The intrinsic complexity of AI systems and the multitude of individuals involved in their use requires a centralised State responsibility for violations of international obligations by its state forces in order to avoid the infamous ‘accountability gap’.

Throughout this thesis, some of the possible weaknesses of AWS have been detected; autonomous UAVs will inevitably be involved in international law controversies due to the limitations inherent in any AI system that aims to deal with situations as unpredictable as armed conflicts, where any miscalculation can lead to multiple civilian casualties or serious property damage. Assuming there is no point in blaming artificial devices, it can be concluded that only human beings are subject to legal rules. The behaviour of individuals still remains a crucial factor for the application

of the ILC-Articles for violations of *ius ad bellum*, *ius in bello* and IHRL; either through the revision of new weapons, the adoption of precautionary measures, or of decisions of the SC. The final decision as to whether an AWS is actually used in a specific operation remains with human beings, especially, military officials in charge of developing operational plans. In this sense, when weighing the possible collateral damages against the benefits of continuing with an operation, the unpredictability factor applicable to devices that "think" on their own should be included. From the opposite point of view, the use of robots must be in accordance with the inevitable limitations of the human being when trying to trace the decision-making processes that the robot goes through in its attempt to respond to external stimuli on the battlefield.

Given that in the cases analysed, interests and values essential to the international community are being dealt with, it can be concluded that the violation of rules contained in the three substantial international law corpuses could probably amount to serious breaches of peremptory norms of general international law pursuant to the ILC-Articles. This regime of aggravated responsibility, far from imposing greater penalties recalls the power conferred on the international community as an element of exerting pressure on those States that are in breach of *erga omnes* or *erga omnes partes* obligations. Considering the difference in opinions between countries in relation to AWS, it could be the case that some States (especially European) exert said pressure against States that do possess such a level of AI in their military arsenals.

Hence, AWSs' lack of humanity does not *per se* cause a responsibility void as long as they are treated as what they are: a weapon whose use depends on a human decision. AWS are not intrinsically lethal, however, they will have to be used by States under the constant supervision of its organs and with multiple precautionary measures in order to assess the inevitable unpredictability of robots and avoid breaches of international obligations of States whether acting alone or as a MS of an international organization.

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