TALLINN UNIVERSITY OF TECHNOLOGY
School of Business and Governance
Department of Law

Julia Kotimäki

DETERMINING THE INDIVIDUAL CRIMINAL RESPONSIBILITY REGARDING KILLING OF CIVILIANS WITH DRONES DURING AN ARMED CONFLICT

Bachelor's thesis

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Supervisor: Evhen Tsybulenko, PhD
Co-supervisor: Ondřej Svaček, PhD

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Julia Kotimäki……
(signature, date)
Student code: 166307HAJB
Student e-mail address: jukoti@ttu.ee

Supervisor: Evhen Tsybulenko, PhD:
The paper conforms to requirements in force

……
(signature, date)

Co-supervisor: Ondřej Svaček, PhD:
The paper conforms to requirements in force

……
(signature, date)

Chairman of the Defence Committee:
Permitted to the defence
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(name, signature, date)

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ABSTRACT

The usage of armed drones in armed conflicts have caused civilian casualties. It is a fundamental interest of international humanitarian and criminal law to establish individual criminal responsibility for crimes, since it serves both as a preventive measure, and as a measure providing justice when a crime has been committed. The aim of this thesis is to provide an answer to the research question: Does the contemporary law serve effectively the objective to establish responsibility for the crimes of killing of civilians with drones? The hypothesis of this study is that the answer is negative. This research demonstrates that the requirements for the establishment of such responsibility are too hard to achieve in practice. Problems may arise from unclear or insufficient rules, complexity of the decision-making process, automation, and procedural obstacles. Therefore, the current legislation do not provide as high safeguards for civilians as it should regarding the legitimate interests of the civilians. This situation could be improved with some measures proposed in this paper. The research method of this study is qualitative, descriptive and analytical. The study uses the interpretation of international legal norms and analyses their applicability to a specific case, by collecting and analysing already existing academic writings and argumentation from electronic sources.

Keywords: armed drone, automated weapon system, civilian casualties, individual criminal responsibility, commander responsibility

INTRODUCTION

The drones have been developed, primarily for military purposes, for over 100 years. During the last decades, they have been armed for military purposes, and become an increasingly popular means in armed conflicts. However, the usage of drones has not led only to desirable outcomes, but it has also caused problems, such as civilian casualties. The laws and ethics regarding the usage of the military drones have been under ongoing debate. Especially, their operability from a distance, and increasing autonomy during operations lead to questions on ethics and responsibility. Even though there is no specific law on drones in armed conflicts, the rules of international humanitarian law govern the lawful usage of these devices. Nonetheless, individual criminal responsibility can be hard to determine, and some scholars even argue that there are gaps that can lead to situations where no individual can be held responsible for war crimes committed with drones. It is a fundamental interest of international criminal law to establish individual criminal responsibility for crimes, since it serves both as a preventive measure, and as a measure providing justice when a crime has been committed.

A breach of international law leads to responsibility for such breach. Individual natural persons are responsible for their own crimes, such as war crimes. War crimes is one category considered to be among the most serious crimes threatening the well-being of the international community, and therefore the prosecution and punishment for such crimes should be ensured.[1] However, the usage of drones have some features that make it harder to establish the individual criminal responsibility and prosecute for crimes. These features are especially 1) the increasing automation and 2) the operability form distance and 3) the plurality of decision-makers in the process of applying lethal force. For example, the automation may rise the question, whether all the elements of a criminal act, such as intention, can be established. The same questions arise, where the decision-makers have limited or false information. The operability from distance may limit the investigations for evidence after the attacks.

[1] Rome Statute of the International Criminal Court, preamble.

The aim of this thesis is to provide an answer to the research question: Does the contemporary law serve effectively the objective to establish responsibility for the crimes of killing of civilians with drones? The hypothesis of this study is that the current legislation fails to establish the individual criminal responsibility effectively for the killings of civilians with armed drones. The requirements for the establishment of such responsibility are too hard to achieve in practice. Problems may arise from unclear or insufficient rules, complexity of the decision-making process, automation, and procedural obstacles. Therefore, the current legislation does not provide as high safeguards for civilians as it should regarding the legitimate interests of the civilians. This situation could be improved with some measures proposed in this paper.

To answer the research question, the research has three parts. In the first chapter, the general rules regarding the killing of civilians, and the establishing of individual criminal responsibility are examined. The discussion concerns the rules for lawful and unlawful killing and protection of civilians and other persons not taking active part in the hostilities. The second chapter studies the contemporary usage of drones. It presents the typical usage of armed drones, the specific features that make drones interesting regarding the responsibility questions, and the problem of civilian casualties. The third chapter analyses the applicability of the general rules in the usage of drones to reflect how the rules are applied in the practice and discusses the weak and strong parts of contemporary laws and practices for determining the individual criminal responsibility with drones. There is an evaluation of the effectiveness of the contemporary law protecting civilians, and suggestions to improve the legislation based on the findings of this research.

The research method of this study is qualitative, descriptive and analytical. The study uses the interpretation of international legal norms and analyses their applicability to a specific case, by collecting and analysing already existing academic writings and argumentation. The information is gathered from electronic legal databases, since they are most suitable for this study. They are reachable, and their content reflects a wide range of positions regarding the questions of this research. The modern drone warfare is a relatively new topic, and the electronic sources are the best for providing the latest and up-to-date information.

1. RESPONSIBILITY IN INTERNATIONAL HUMANITARIAN LAW

1.1 International Humanitarian Law and Responsibility Questions

International humanitarian law (IHL) is a body of international rules regulating the conduct in an armed conflict. Human history is full of wars and preventing them completely is not a feasible goal at least in near future. This is the reason for the development of the rules of war - to minimize the suffering caused by an armed conflict. IHL applies both, in international and non-international armed conflicts, yet, providing more comprehensible rules in international armed conflicts.[2]

International humanitarian law is a branch of public international law (PIL), which is a system of legally binding norms and principles that regulate the relationships, rights and responsibilities of States and intergovernmental organisations (IGO). The primary sources of PIL, and therefore IHL too, are international treaties, international customs, and general principles of law recognized by civilized nations, which all three have equal order of importance.[3] The secondary sources are judicial decisions and teachings of scholars.[4] Even though States and IGO are subjects of IHL and they have responsibilities for acts that are attributable to them[5][6], this thesis will concentrate on individual criminal responsibility concerning individual natural persons, which is a matter of international criminal law (ICL). ICL is a body of international rules as well, and regulates the question of individual criminal responsibility arising from breaches of international law. It is also a branch of PIL, but it is different in a sense that where the subjects of PIL are in general the States and IGO, the subjects of ICL are individual natural persons.

[2] Geneva Conventions of 1949, and the Additional Protocols I and II.
[3] Statute of the International Court of Justice, article 38.
[4] *Ibid.*
[5] Draft articles on Responsibility of States for Internationally Wrongful Acts. 2001.
[6] ICRC, Customary IHL Database. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule149, 16 November 2020

The two main branches of international humanitarian law are Geneva law and Hague law, named after their main treaties. Geneva law protects the victims of war, such as wounded and sick soldiers, prisoners of war, and civilians. Its main legal instruments are the four Geneva Conventions of 1949, which are universally ratified, and the three additional protocols to these conventions. The other branch, Hague law, regulates the means and methods of warfare. Historically, the main treaties regulating the means and methods of war were, in particular, the Hague Conventions of 1899 and 1907. Nowadays, these conventions are still central part of international humanitarian law, but in the field of means and methods, there are other significant treaties too, such as the United Nations Convention on Certain Conventional Weapons.

The international and non-international character of a conflict determines which laws apply in it. International armed conflict is a conflict, which involves at least two armed forces of sovereign states or intergovernmental organisations.[7] In international armed conflict, the parties are bound by their international obligations regulating conduct in armed conflict, such as the four Geneva Conventions. Non-international armed conflicts (NIAC) are less regulated, but not completely without specific rules. NIAC is an armed conflict that involves one or more independent organised armed groups, and which might involve the armed forces of sovereign states or intergovernmental organisations.[8] Beginning of NIAC triggers the application of the Common article 3 of Geneva conventions, which sets the minimum rules and protections. The common article 3, paragraph 1 provides that "Persons taking no active part in the hostilities - - shall in all circumstances be treated humanely". The letter a) of the respective paragraph mentions the violence to life and person, in particular murder of all kinds, as a prohibited act at any time towards these protected persons. In a case, where NIAC involves the armed forces of a state, and the other party is an organised armed group that controls part of the territory of the state, the armed conflict is high intensity NIAC, and in addition to the Common article 3, the further rules of the Additional Protocol II apply in it.[9]

The pace of armed conflicts and their types have changed over the history. After the Cold War, the number of armed conflicts has decreased.[10] However, as the number of interstate conflicts has decreased, the number of NIACs has risen.[11] The role of non-state actors has gotten greater than

[7] Geneva Conventions of 1949, article 2.
[8] Geneva Conventions of 1949, common article 3.
[9] Additional Protocol II to the Geneva Conventions of 1949, article 1.
[10] Pettersson, T., & Wallensteen, P. (2015). Armed conflicts, 1946–2014. *Journal of Peace Research*, *52*(4), 536–550.
[11] *Ibid.*

ever before in armed conflicts.[12] There is also more foreign involvement to intrastate conflicts, making them internationalized even though the main parties would not itself be from different states, but as their supporters may be.[13]

One of the main interests of IHL is to determine responsibility in every action that takes place in an armed conflict. The interest derives from the idea, that people are less likely to commit crimes if they can be held responsible for them, and when settling former wrongdoings, the ones that are responsible can be punished. Individual criminal responsibility is the responsibility imposed to individual natural persons for their actions against international law. In international law, the responsibilities are based on international norms, such as the Geneva Conventions or Hague Conventions. Customary IHL is recorded to a large extent by International Committee of the Red Cross.[14]

The perpetrators are punished either by national or international courts. Respecting the sovereignty of the states, preference can be given the national courts, which is the case e.g. with the International Criminal Court that provides the principle of complementary in its first article.[15] However, in special cases in the history, the preference of the jurisdiction has been given to international ad hoc tribunals - the most known of them being the International Criminal Tribunal for the former Yugoslavia[16], and the International Criminal Tribunal for Rwanda[17]. To serve justice on permanent basis, the International Criminal Court was established, as a permanent court for the most severe crimes, including the war crimes, crimes against humanity, genocide, and crime of aggression.[18]

1.2 Rules regarding the Killings in Armed Conflict

It is an idea of a common sense that the one who commits a killing without a right, should be responsible for that act. This sub-chapter explains the lawfulness and unlawfulness of killings

[12] Haugstvedt, H., & Jacobsen, J. (2020). Taking Fourth-Generation Warfare to the Skies? An Empirical Exploration of Non-State Actors' Use of Weaponized Unmanned Aerial Vehicles (UAVs—'Drones'). *Perspectives on Terrorism, 14*(5), 26-40.
[13] Pettersson, Wallensteen (2015), s*upra nota* 10, 536-550.
[14] ICRC, Customary IHL Database. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/home, 16 November 2020.
[15] Rome Statute of the International Criminal Court, article 1.
[16] Statute of the International Criminal Tribunal for the former Yugoslavia, article 9.
[17] Statute of the International Tribunal for Rwanda, article 8.
[18] Rome Statute of the International Criminal Court.

during an armed conflict. It is notable, that general principles are applicable in all circumstances of armed conflicts, and they do not depend on the arms used.

During an armed conflict, when IHL applies, it is lawful that a combatant can kill an enemy combatant that takes part in the hostilities, in order to gain military advantage over the opposing power. Killing of other persons is not legal, and the combatants have protections in some situations too. The legitimacy for killing a combatant comes from the only accepted goal for the use of force in an armed conflict, which is the weakening of the opposing military force. This idea was written already in the St. Petersburg Declaration, the first international formal agreement prohibiting the use of certain weapons, in 1868.[19] In other words, according to this idea, all the attacks in an armed conflict should aim for this goal, and the use of force for other purposes is prohibited. This is the reasoning and content of one of the core principles of international humanitarian law - the principle of military necessity.

Regarding the previous idea, it is necessary to examine the classification of persons in armed conflict. According to the ICRC's IHL database on customary IHL, the definition of a combatant goes as follows: "All members of the armed forces of a party to the conflict are combatants, except medical and religious personnel."[20] The definition of armed forces does not include only the apparent armed forces, but also other groups and units that are under the hierarchy of command and responsibility of the party to the conflict – the responsibility covering the acts of the subordinates.[21] All the other persons are non-combatants, and the persons outside armed forces have also a status of civilian, except *levée en masse*[22].[23] Even though this definition of armed forces can be considered to be part of customary law, and it is included to Additional Protocol I to Geneva Conventions, it is not the only definition. The Hague Regulations of 1907, and 1949 Geneva Convention III provide narrower definition for additional units for armed forces by including them under the regulations only where they fulfil the following conditions: "1) To be commanded by a person responsible for his subordinates; 2) To have a fixed distinctive emblem recognizable at a distance; 3) To carry arms openly; and 4) To conduct their operations in accordance with the laws

[19] St Petersburg Declaration relating to Explosive Projectiles, 1868.
[20] ICRC, Customary IHL Database, rule 4. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule4, 12 December 2020.
[21] *Ibid.*
[22] *Levée en masse* refers to inhabitants of a country, spontaneously defending themselves with arms when an enemy is approaching. In this case, they are considered as combatants even though they would not have time to organize themselves as armed forces, if they carry arms openly and respect the laws and customs of war.
[23] ICRC, Customary IHL Database, rule 5. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule5, 12 December 2020.

and customs of war." Thereby, the definition of armed forces depends on the party to a conflict i.e. which treaties it is party to, and whether "customary law" can be enforced effectively.

Another principle central in the IHL is the principle of distinction, which means that the parties of a conflict must always make a distinction between combatants and civilians, and military and civilian objectives.[24] The power can be applied only towards military objectives. Therefore, the legal targets of attacks are the combatants, buildings, vehicles and other property used for military purposes, excluding the medical and religious personnel and property. Armed forces should not attack anything outside these military objectives.

The objects with dual purposes i.e. objects, that serve both for military and civilian purposes, must be considered individually. They can be attacked only with respect to the principle of proportionality, which applies not only to objects with dual purposes, but also to any attack that may cause damage to other than military objectives. The principle of proportionality means that if it may be expected that an attack causes damage to civilians or civilian objects, such attack may be launched only if the damage would not be excessive to the concrete and direct military advantage acquired with the attack. In other words, the collateral damage caused to other than military objectives must be considered carefully, and it must be reasonable compared to the military advantage. As mentioned above, the principle of military necessity sets the minimum requirement for all use of force regarding the aim of the attack. The principle of proportionality is closely related and develops the requirements further in situations where the advantages for the attacker and the damage to civilians must be reasonable in case of an attack. It is notable, that even though the principle of proportionality aims to reduce damage to civilians, it does not prohibit it completely. Accordingly, if the military necessity and direct military advantage is great enough compared to the damage to civilians, it is lawful to strike such objective. However, determining the exact level of proportionality depends on interpretation. It is argued that the test for determining "excessive damage" depends on the power and resources of the party, meaning that the performance on the sparing of civilians within the requirement of proportionality can vary depending on the capabilities of a party.[25] On the other hand, it is also noted, that the Additional Protocol I to the Geneva Conventions formulates the requirement in such way, that the comparison

[24] Additional Protocol I to the Geneva Conventions of 1949, article 48.
[25] Blum, G. (2011). On Different Law of War. *Harvard International Law Journal*, 52, 163-218.

does not require counting any "exchange value", but simply requires that there is a military advantage and in the operation to achieve this advantage, the civilian losses must be minimised.[26]

The principle of precautions in attack imposes an obligation to observe constant care to spare the civilians.[27] This requires the parties to use all feasible precautions to avoid and minimize the loss of civilian life, injury to civilians and damage to civilian objects.[28] The principle of precautions in attack has certain sub-principles or components that must be minded to fully observe this principle that aims to avoid damage to civilians. The principle has been included to written law extensively in the article 57 of the Additional Protocol I of the Geneva Conventions, which however didn't create new law but codified customary law.[29] In addition to the article 57, the principle and its sub-principles are well recorded in the ICRC's IHL database on customary IHL, and include the following: the target verification that substantiates the principle of distinction as well; choice of means and methods to avoid damage to civilians; assessment of the effects of the attack to verify the compliance with the principle of proportionality; the control during the execution of attacks in order to cancel or suspend an attack in case of finding a civilian nature of the object or a likely upcoming breach of the principle of proportionality; advance warning unless circumstances do not permit it, and; target selection in attacks to prefer, where the expected military advantage is similar, the military objectives on which the attack causes less damage to civilians.[30]

As referred in relation to the principle of precautions, the selection of weapons is not unlimited for the parties. This applies in general, not only regarding the civilians. In the selection of weapons, the parties must follow law. Weapons that cause superfluous injury or unnecessary suffering, are prohibited, which applies due to customary law, but is also reflected in the written conventions on the limitation of weapons.[3132] Regarding the means and methods of war, the parties should not practice so caller "risk-transfer" policies, by which the risk to their own soldiers is transferred on

[26] Estreicher, S. (2011). Privileging asymmetric warfare (part ii): The proportionality principle under international humanitarian law. *Chicago Journal of International Law*, 12(1), 143-158.
[27] ICRC, Customary IHL Database, rule 15. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule15, 12 December 2020.
[28] *Ibid.*
[29] Rosén, F. (2014). Extremely Stealthy and Incredibly Close: Drones, Control and Legal Responsibility, *Journal of Conflict and Security Law*, 19 (1), 113–131.
[30] ICRC, Customary IHL Database, rule 15. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule15, 16 November 2020.
[31] Additional Protocol I to the Geneva Conventions of 1949, article 35.
[32] Convention on Certain Conventional Weapons, preamble.

civilians of the opposing party.[33] This implies that the choose of means and methods should be guided to prefer the protection of civilians over the protection of the attackers themselves.

Regarding the weapons and attacks in general, indiscriminate attacks are prohibited. This follows from the principle of distinction that conducts the selection of targets and limits them to military objectives. However, the prohibition of indiscriminate attacks elaborates it to concern also the effects of an attack, like required by the principle of proportionality and principle of precautions. An attack is indiscriminate, and thereby prohibited, if its effects cannot be limited as required by international humanitarian law.

All of the above-mentioned general principles come from the customary law, and they are also included to relevant conventions. As referred above, e.g. the Geneva Conventions and their Additional Protocols provide many of these principles in codified treaties, and the ICRC provides the compilations of customary humanitarian law.

When referring to the commitment of a crime, such as wilful killing, it is notable that not only direct killing, but also assisting, aiding, abetting, facilitating, commanding, and an attempt to commit, are illegal acts. In some cases, pure planning is considered as a crime too. These different forms of participation leading to individual criminal responsibility are explained in detail in the next sub-chapter.

1.3 Individual Criminal Responsibility regarding Killings of Civilians

Individual criminal responsibility is a concept that refers to individual natural person's responsibility on a crime that the person has committed. In international law, a crime arises from a breach of international law, such as the rules of international humanitarian law regulating the lawful killing as explained in the previous sub-chapter. The consequences of the individual criminal responsibility are the possibility to punish that person and make the person liable for reparations. It has also a mental effect by confirming that the act was wrongful, and this person is the one that did wrong.

[33] Shaw, M. (2002). Risk-transfer Militarism, Small Massacres and the Historic Legitimacy of War. *International Relations*, 16(3), 343–359.

Individual criminal responsibility for a crime requires couple of elements. Firstly, there must be *actus reus*, guilty act.[34] The guilty act means the physical conduct of a person, that fulfils the material elements of a description of a crime in law and causes certain consequences.[35] E.g., in the wilful killing, referred as murder too, the perpetrator commits a physical act that causes the death of the other person, such as shooting the person fatally. However, the *actus reus* does not constitute a crime as such, but it also has to include the second element, *mens rea*, guilty mind, which means that in order to commit a crime, there must be the mental element of the perpetrator.[36] The mental element is defined e.g. in the article 30 of the Rome Statute of the International Criminal Court. It states that the responsibility arises only if the material elements of a crime are committed with intent and knowledge.[37] The intention means that the person intents to engage the conduct, and as to the consequence, the person has an intention to cause the effect, or is aware that such consequence will happen if he or she engages the conduct.[38] The requirement of knowledge means that the person is aware of the existing circumstances and is aware that the consequences will occur.[39] Regarding the mental element in the Rome Statute, when a literal interpretation is used, only *dolus directus* is acceptable, which means that the mental element is present only in cases where the person knows that the consequences will happen. The intent and knowledge concerns only the foreseeable consequences in ordinary course of events. For example, there is *dolus directus* when a person has the intent to shoot another person, knowing that in ordinary course of events it will cause the death. As well, bombing a building in order to kill one person, knowing that in ordinary course of events also other persons in the same building will die, there is *dolus directus* regarding all the deaths in the building as a result of such bombing. In comparison, the *dolus eventualis*, is not included to the mental element, as it refers to the consequences that are uncertain or unpredictable. In such case, the person is regarded as not having the intent or knowledge as to the consequences, and therefore the person has no mental element that is required for the commission of a crime.

The *actus reus* and *mens rea*, are the requirements to establish the commitment of a crime. In addition to these, there must not be circumstances precluding wrongfulness. The circumstances precluding wrongfulness are such circumstances in which the person has a legitimate reason to

[34] Knoops, G. (2014). Drones at trial: State and individual (criminal) liabilities for drone attacks. *International Criminal Law Review*, 14(1), 42-81.
[35] *Ibid.*
[36] *Ibid.*
[37] Rome Statute of the International Criminal Court, article 30.
[38] *Ibid.*
[39] *Ibid.*

commit an act which would otherwise constitute a crime, and not to be held criminally responsible. For example, the lack of real possibility to make the moral choice due to the duress will efface the blameworthiness of the act.[40]

As mentioned earlier, the liability for a crime does not concern only the direct act of killing, but also other participants whose contribution lead to the killing. As set out in article 25 of the Rome Statute of the International Criminal Court, not redefining the scope of individual criminal responsibility but reflecting the customary law[41], the individual criminal responsibility arises from different acts that lead towards or in the actualisation or attempt of a crime. The first category is the actual commitment either individually, collectively or indirectly. Secondly, the responsibility arises when a person orders, solicits or induces the commission of such a crime which in fact occurs or is attempted. It is well established, that especially, a commander is responsible for war crimes committed in conformance to his or her orders. Thirdly, aiding, abetting or otherwise assisting in the commission of a crime or its attempted commission, in order to facilitate the commission of a crime, is criminal. Fourthly, with some conditions, it is illegal to otherwise contribute to the commission or attempt of a crime, that is committed by a group of persons with a common purpose. Additionally, the commanders and other superiors are responsible for the crimes committed by forces under their effective control, as set out e.g. in the article 28 of the Rome Statute. Such responsibility of a superior concerns his or her failure to exercise control over the forces that the person is responsible for, meaning his or her failure to take reasonable steps to prevent or repress the commission of crimes, or the failure to submit such case to a competent authority for investigation and prosecution. Again, the mental element is included to the responsibility, as the military commander is responsible for his or her failure where he or she knew or should have known about the criminal actions or the upcoming criminal actions of the group.

Even though, the individual criminal responsibility is established for setting obligations and for punishing people acting against them, it is also an element securing the rights of the alleged perpetrator. It is a rule of criminal procedure, that no one may be convicted of an offence for which he or she is not responsible for.[42] Therefore, the requirement for establishing the responsibility is important both for the accused as providing security against wrongful convictions, and for the

[40] Nortje, W., & Quénivet, N. (2020). *Child Soldiers and the Defence of Duress under International Criminal Law*. Palgrave Macmillan, Cham.
[41] Werle, G. (2007). Individual Criminal Responsibility in Article 25 ICC Statute, *Journal of International Criminal Justice*, 5 (4), 953–975.
[42] ICRC, Customary IHL Database, rule 102. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule102, 20 December 2020.

prosecution as securing the legitimacy of its judgements. The responsibility for a crime leads to the possibility to punish that person, and liability for reparation.

2. DRONES IN ARMED CONFLICTS

2.1 Contemporary Usage of Drones in Armed Conflicts

Drones have different physical shapes and purposes of usage. However, the common features include a flying vehicle that does not have crew in it, but which is operated either in real time from a distance, or is programmed beforehand to complete a certain task, or which pilots itself with more complex autonomous processes during the flight.[43] Accordingly, the base for operating is external from the flying device itself, and it can be located to a fixed place or it can be movable. The drone systems have a communications link and a power source.[44] The range of operability distance and time depends on the drone model, but those can vary greatly and be anything between short range of visibility and time of few hours, to unlimited radius of mission and the time of days or even weeks in the air.[45] The limiting factors can be the capacity of transmission of data between the operating base and the device, which limits the distance between them, and the power source of the drone, limiting its time in the air.[46] All the drones, have a capacity to carry a payload, which is the term used for additional load, not necessary for the flying, such as camera or weapons.

The term drone has multiple synonyms and terms with close meanings, such as unmanned aerial vehicle (UAV), unmanned aircraft (UA), or unmanned aircraft system (UAS).[47] In this thesis, the term drone is used to refer to the whole system required to fly the unmanned vehicle, including the vehicle itself, communications systems, operation station, and launching equipment etc. As this thesis concentrates on armed drones, in this paper, the term drone refers to those equipped with weaponry. The term drone was chosen because it is easily comprehensible, it is used in the public discussion, and it is flexible in its usage, as it satisfyingly captures the features of the terms

[43] Gupta, S.G., Ghonge, M.M., Jawandhiya, P.M. (2013). Review of unmanned aircraft system (UAS). *International Journal of Advanced Research in Computer Engineering &Technology*, 2(4), 1646-1658.
[44] West, G. (2015). Drone on. *Foreign Affairs,* 94(3), 90-97.
[45] Gupta, Ghonge, Jawandhiya (2013), *supra nota* 43, 1646-1658.
[46] *Ibid.*
[47] *Ibid.*

mentioned above. Also, if a drone has the capability to identify targets and make decisions to attack independently without human intervention, it can be included also to the category of autonomous weapon system (AWS).[48] This feature is likewise possible to be incorporated into the term drone where needed.

There are different units operating the drones. Military personnel may operate near the combat field, or in whole another country. The drone operators may also belong to other organisations outside the military forces, e.g. in the U.S. there is the CIA operating a drone program, which they do not consider as military operation.[49] The living environment and life of the operators – both in military forces and other organizations – may look more like normal civilian life with normal day-time-job in their home country.

The drones were originally developed for military purposes, but nowadays, they are also used in public sector for other purposes, e.g. weather monitoring, and produced for commercial market too.[50] In armed conflicts, drones have served different purposes over the time. The main usages of drones include, inter alia, intelligence, surveillance and reconnaissance, attack and strike, target identification and designation, and law enforcement and security applications.[51] In this research, the concentration is on drones that are equipped with arms and are used to apply lethal force.

The drone strikes have been applied at least since October 2001, when U.S engaged such air strikes in Afghanistan.[52] The first States with known usage of drones for applying lethal force were the U.S, Israel and the UK.[53][54] The same States are also the main drone producers.[55] The New America has listed States that are known to have applied drone strikes, and in addition to the above

[48] Kajander, A., Kasper, A., Tsybulenko, E. (2020). Making the Cyber Mercenary – Autonomous Weapons Systems and Common Article 1 of the Geneva Conventions. In: Jančárková, T. et al. (Eds.), *12th International Conference on Cyber Conflict. 20/20 Vision: The Next Decade* (79-95). NATO CCDCOE Publications, Tallinn.
[49] Sehrawat, V. (2017). Legal status of drones under loac and international law. *Penn State Journal of Law and International Affairs, 5(1),* 164-206.
[50] West (2015), *supra nota* 44, 90-97.
[51] Gupta, S.G., Ghonge, M.M., Jawandhiya, P.M. (2013). Review of unmanned aircraft system (UAS). *International Journal of Advanced Research in Computer Engineering &Technology*, 2(4), 1646-1658.
[52] Ottosen, R. (2014). Underreporting the legal aspects of drone strikes in international conflicts: A case study of how Aftenposten and New York Times cover drone strike. *Conflict & communication online*, 13(2).
[53] Schweiger, R. (2014). Strategies to Justify and Legitimate Armed Drone Strikes. The Reasons for the Differing Strategies of the US, the UK and Israel to Legitimate and Justify Their Armed Drone Policies. Master's thesis, Frankfurt am Main: Johann Wolfgang Goethe Universität. Retrieved from https://ssrn.com/abstract=2790542 , 13 December 2020.
[54] New America. Who Has What: Countries that have Conducted Drone Strikes [Online]. Retrieved from https://www.newamerica.org/international-security/reports/world-drones/who-has-what-countries-that-have-conducted-drone-strikes/, 18 December 2020.
[55] Zwijnenburg W., Blok Z. (2016) Victims of Drone Warfare: Stretching the Boundaries of Conflict; Ethics and Remote Control Warfare. In: Custers B. (eds) The Future of Drone Use. Information Technology and Law Series, vol 27. T.M.C. Asser Press, The Hague.

mentioned, the list includes Pakistan, Nigeria, Iran, Azerbaijan, Iraq, Turkey, U.A.E., Russia, and France.[56] The main users for armed drones are the State armed forces, but since the commercial versions have become cheaper and more available, it has been already reported that some non-state actors have them, and it is likely that there will be significantly more actors with the capacity to use drones in the near future.[57] These capabilities of non-state actors have increased especially in the Middle East.[58] Regarding the State armed forces, e.g. the U.S. has deployed armed drones in both active war zones as well as outside of them, including countries such as Afghanistan, Pakistan, Yemen, Libya, Iraq and Somalia.[59] The drone attacks have caused civilian casualties, which is one of the main reasons why the usage of the drones is criticised.[60] The civilian casualties will be discussed in more detail in the chapter 2.3.

2.2 Automation, Distance, Multiplicity of Decision Makers – Specific Features of Drones

Drones are an interesting case in responsibility questions, since they have couple of specific features. Firstly, technology develops and uses increasingly automation, not only in completion of routine physical tasks, but also with higher-level decision-making. This is the case with drones too. At the lowest level, automation means that the operator of an armed drone programmes it beforehand to complete a certain task, e.g. strike a certain location, and the operator does not have to do anything during the flight. Also, the developers of the drones can introduce different programmes used for reconnaissance purposes. Those could mean e.g., that the drone software processes the video data from the drone, and points out certain objects, such as vehicles or persons, based on their appearance or even behaviour. Further, it is possible to automate the drone to propose or even launch an armed strike against certain targets. If all these parts are combined, the drones can be automated to such a level, in which the operator selects the criteria for targets that

[56] New America. Who Has What: Countries that have Conducted Drone Strikes [Online]. Retrieved from https://www.newamerica.org/international-security/reports/world-drones/who-has-what-countries-that-have-conducted-drone-strikes/, 18 December 2020.
[57] Heyns, C., Akande, D., Hill-Cawthorne, L., & Chengeta, T. (2016). The International Law Framework Regulating the Use of Armed Drones. *International and Comparative Law Quarterly*, *65*(4), 791–827. Cambridge University Press.
[58] Haugstvedt, H., & Jacobsen, J. (2020). Taking Fourth-Generation Warfare to the Skies? An Empirical Exploration of Non-State Actors' Use of Weaponized Unmanned Aerial Vehicles (UAVs—'Drones'). *Perspectives on Terrorism*, 14(5), 26-40.
[59] Sadat, L. (2012). America's drone wars. *Case Western Reserve Journal of International Law, 45(1 and 2)*, 215-234.
[60] Schweiger (2014), *supra nota* 53.

the drone searches for from a certain area, and when recognizing such target, the drone launches an armed strike towards that target. The drone can complete these tasks completely independently during a flight, since all the tasks of the operator can be prepared beforehand.

In relation to unlawful killings, the automation raises several questions on responsibility towards multiple actors. Does the killing of a protected person with an automated drone constitute a crime? Who are the criminally responsible persons in such case? What are the responsibilities of the operators and commanders in prevention of unlawful killings and in case of occurrence of an unlawful killing? The number of persons taking part in the decision making in the process of applying lethal force from a drone is not only a problem with automated drones, but also where there are mistakes of facts, problems with communication or problems that cannot be proven to be caused by technical problems nor by mistakes of the persons operating the vehicle.

The second specific feature of drones is their operability from a distance. The physical distance itself causes problems with ethics rather than law. Regarding the law, contemporary IHL does not prohibit weapons systems with distance, but the distance can hide other illegal aspects. The following are example questions related to this matter. Does the operability from distance protect the operators with the cost of transferring the risk to the civilians in the locations of the armed attacks? Can the attackers escape their responsibility behind the distance and the anonymity provided with it? Are the post-attack investigations completed carefully in remote locations?

Regarding the decision-making process in the usage of the drones, there are multiple persons that take part in the process. The operators are the persons manually operating the drone either during the flight or setting the tasks for the drone before the flights; the commanders make decisions on the participation in operations, selection of means, and detailed orders; the intelligence may support the decision-making by supplying intelligence information. As the number of persons may be great, the process gets more complicated.

2.3 Civilian Casualties Caused with Drones

One of the main criticisms towards drone usage is the proposition that they cause excessive collateral damage. Typical drone strikes are used for “targeted killing” or “signature strikes”, in which the aim of one strike is to kill one person, or a small group of persons. However, some targets, such as terrorists, are often located relatively near to civilians, with the effect of exposing civilians in danger. Civilian casualties are caused by multiple different reasons. Firstly, the strike

can be directed illegally to a civilian target. The other case is that the strike might not be accurate, and instead of hitting the target, it hits a near place, where civilians are located. The third is that strikes are aimed to a place where the targeted person is, when there is known to be civilians too, but their deaths are explained to be justified as collateral damage. The fourth main cause is the mistake between combatants and civilians, meaning that the targeted person or the persons around him or her are perceived to be combatants, even though they would be civilians, thus, not being counted as collateral damage prohibiting the strike. The latter should be avoided with sufficient efforts of intelligence before the usage of lethal force, but still it seems to be used as an argument to explain some civilian deaths.

There is no reliable and comprehensive statistics of the total number of civilian casualties caused with drones. However, there are sources that can be used to estimate the scale of these cases. To give some examples, the Bureau of Investigative Journalism, tracking the U.S. drone strikes and other covert actions in Pakistan, Afghanistan, Yemen, and Somalia, estimates that there have been between 910-2200 civilian deaths.[61] For the events in Yemen between 26.3.2015 and 8.11.2018, the UN Human Rights Office has documented 6872 civilian deaths, most of which were caused by Saudi-led airstrikes.[62] An investigation made by the New York Times in 2017 found that there were civilian casualties in 1 out of 5 strikes made by American-led coalition fighting the Islamic State in Iraq and Syria.[63] As there are no reliable numbers, the death rates reported by States and by organizations differ greatly from each other. However, it can be concluded that there is excessive amount of deaths, or alternatively there seem to be excessive amount because of the lack of reliable sources and lack of transparency.

[61] Drone Warfare. The Bureau of Investigative Journalism. Retrieved from https://www.thebureauinvestigates.com/projects/drone-war 21 December 2020.
[62] United Nations Human Rights Office of the High Commissioner [Online]. Retrieved from https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=23855&LangID=E , 21 December 2020.
[63] Khan, Azmat, Anand Gopal. “The Uncounted.” The New York Times. November 16, 2017. Retrieved from https://www.nytimes.com/interactive/2017/11/16/magazine/uncounted-civilian-casualties-iraq-airstrikes.html , 21 December 2020.

3. ESTABLISHING CRIMINAL RESPONSIBILITY FOR UNLAWFUL KILLINGS WITH DRONES

3.1 Applicable Rules on the Usage of Armed Drones

The international humanitarian law aims to reduce the unnecessary suffering and to protect persons that are not taking part in the hostilities. As introduced in the first chapter, the usage of lethal force must be legal and follow the laws of armed conflict. The Parties to a conflict are bound to respect the laws and principles of IHL, which also regulate the usage of drones, even though there are no specific laws on drones. The main breach of IHL in the concern of this thesis is the killing of civilians, which is unlawful in most of the circumstances as explained in the first main chapter of this paper. Civilians have enjoyed protection under humanitarian law, as the principle of civilian protection has been widely accepted and essential part of it for a long time.[64] However, this principle has been constantly violated, and its credibility as a central piece of humanitarian law deteriorates as the practice is in constant dissonance with its actual intended protection to civilians.[65] Also, the protection of civilians is their right, but in practice in an armed conflict, their protection is limited to the rules regulating the actions of attackers, obliging the attackers to abstain from certain actions, and to follow certain precautions. The civilian casualties occur, where the attackers breach the IHL, or where the rules are insufficient in their prohibitions or where the exceptions can be interpreted too favourably for the attackers. As provided in the chapter 2.3, the civilian casualties are certainly a problem that arises from the usage of drones too.

It is proposed that the current legal framework provides the sufficient basis for legitimate use of drones, but the improvement could be done in three interrelated areas: 1) coordinate a mutual understanding on the baseline on the applicability of the existing laws of armed conflicts and

[64] Hayashi, M. N. (2007). The principle of civilian protection and contemporary armed conflict. In: Hensel, H. M. (Ed.), *The Law of Armed Conflict: Constraints on the Contemporary Use of Military Force*. *Global Interdisciplinary Studies Series* (105-129). Ashgate Publishing, Ltd.
[65] *Ibid.*

established interpretations, 2) improvement of weapon review practices both at national and international level, and 3) improvement on the cooperation between the producers and the end-user parties of the weapons, including the contribution to the review practices.[66] The current paper's author agrees with these improvement suggestions but disagree with the sufficiency of the current laws.

To be legal, the drone attacks must follow e.g. the principle of distinction, principle of proportionality and the principle of precautions, which all serve the protection of civilians. It is suggested that the current legislative text does not provide clear standard for the care that a person making decisions should follow, but its two central elements – subjective honesty and objective reasonableness – can be identified from comprehensive study of various sources of international law.[67] The test on these elements, the subjective-objective test, aims to examine the subjective beliefs of the person, as to whether he or she truly believed that the action was legitimate, and the objective reasonableness as to the facts that were known to the person and whether it is objectively reasonable to end to the same conclusion with the person with the same knowledge and circumstances.[68] This criteria would apply to any usage of means and methods, including the drones. Regarding the information that the commanders and the drone users use as basis for their attacks, such as the information provided by intelligence, it seems that this subjective-objective test would assess the acts of the intelligence when passing the information to the other actors making decisions based on the information. The subjective test would assess whether the intelligence believed that it was legitimate that they passed the information concerned to next actors. The objective test would assess whether it is objectively reasonable that they believed in the trustworthiness of their information, and in case of uncertain information, they took reasonable measures to ascertain it, or submitted it with disclaimer noting the uncertainty. It is a reasonable expectation that the intelligence knows that even lethal decisions are made according to their information, so they must follow a good standard of care in their submissions of information. The same applies to the intelligence gathered by the operator itself. The subjective-objective-test is a good tool for examining the responsibility in individual case, but it does not help to protect civilians in a larger picture. Even with the subjective-objective-test, there is no clear standard for the precautions, or for the understanding of the definition of proportionality referring to "concrete

[66] Anderson, K., Reisner, D., Waxman, M.C., (2014). Adapting the Law of Armed Conflict to Autonomous Weapon Systems. Journal: *International Law Studies*, 90, 386-411.
[67] Merriam, J. J. (2016). Affirmative target identification: Operationalizing the principle of distinction for u.s. warfighters. *Virginia Journal of International Law*, 56(1), 83-146.
[68] *Ibid.*

and direct military advantage". As long as the standard of the rules are not clear, they can be interpreted as giving favourable conditions for the attackers and to exclude their liability. Each of these definitions and standards could be examined in a greater detail, which is not possible to cover in this paper. However, it must be noted that the definitions are not always clear, which leaves the civilian protection to a lower level than it should.

There should be improvement to achieve good and clear standards for unlawful acts. Where there is space for consideration in the applicability of a prohibition, the civilian protection is compromised. E.g., expressions like "all feasible means" or "concrete and direct military advantage" depend on the circumstances. Even though the common sense and good faith would guide the interpretation, there is a clear possibility to interpret such things advantageously for the attackers and to protect the accused in case of doubt. Part of the solution could be obliging the drone users to record their operations to a very large extent, and to oblige them to demonstrate their innocence in case of doubt. This is not to suggest to turn the presumption of innocence upside down, but to create a new obligation that would help to enforce the rules internally and to provide further evidence in trials.

Where some of these rules applicable to the usage of drones have been breached, it is in the interest of the IHL to find a person who can be held responsible for the breach. There are many persons, with different roles and responsibilities, that have the obligation to ensure the compliance, and who might be held responsible, as will be discussed next.

3.2 Establishing responsibility in multi-level decision-making process

There are multiple key persons that must be considered in the discussion of individual criminal responsibility for the killing with a drone. The operator of the flight operates the drone and makes the final decisions and physical actions to commit an armed attack with the drone. In addition, the operator works in cooperation with other members of the crew, that are responsible for the physical condition and preparation of the drone. The operator and other members of the crew may operate as subordinates in their armed forces, so they have commanders or other superiors, who give orders for them, and are responsible for the actions of the forces under their power. Additionally, besides the information gathered with the drone, the intelligence may be supported with other sources that again bring more persons to the decision-making process. Attacker is responsible for their selection of weapons, so some person of the attacker party is responsible for deciding on the weapons used,

including the decision to apply armed drone. Also, where a drone has some malfunction, the developers, producers and the arms dealers might be responsible too.

To justify a killing in armed conflict, the person engaging in killing must has the status of a combatant. Therefore, it is reasonable to study the legal status of the operator. If the operator belongs to the armed forces of a party to a conflict, he or she is a combatant.[69] As the units that operate drones are not necessarily part of the traditional armed forces, it is reasonable to establish whether they belong under the definition of armed forces. As noticed, according to the definition in customary law by ICRC, the armed forces include not only armed forces, but also groups and units which are under a command responsible to that party of a conflict.[70] Such command is responsible for the party of a conflict for the acts of its subordinates.[71] Therefore, if the operator is part of a command chain, that is in the end responsible for the party of a conflict, the operator belongs to the armed forces and is a combatant despite of the form of the unit to which he or she belongs to. The status of combatant is clear with military personnel. Also, this would include, e.g., the CIA and its personnel where the U.S. is a party to a conflict and the CIA uses armed drones for these purposes. In other words, the personnel would be counted as combatants, since they are responsible for the State of the U.S., even though it is a different unit from the military forces. However, there are also contradictory suggestions claiming that since the CIA drone operation is not a military operation, and since the personnel do not wear uniforms or carry arms openly, they should not be considered as part of armed forces and thereby the IHL should not be applied to them.[72] The U.S. is not party to the Additional Protocol I to Geneva Conventions, and therefore they may insist the narrower definition of armed forces. It is problematic that the legal status of certain drone operators, that apply lethal force in war zones, is disputed.[73] It affects or the effective protection of civilians, because the IHL rules and the criminal responsibility cannot be enforced. This criterion for armed forces also excludes terrorist attacks by persons of unorganized groups, and other civil crimes, that are investigated and prosecuted under national laws, instead of IHL and war crimes. Of course, such actions may occur during an armed conflict, but if the perpetrators are not part of a party to the conflict, such attacks are more likely a matter of national civil and criminal law.

[69] ICRC, Customary IHL Database, rule 3. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule3, 12 December 2020.
[70] ICRC, Customary IHL Database, rule 4. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule4, 12 December 2020.
[71] *Ibid.*
[72] Sehrawat (2017), s*upra nota* 49, 164-206.
[73] *Ibid.*

Regarding the hierarchy and components of armed forces, the requirement of responsibility for the acts of subordinates is central. Respectively, it can be concluded that if the operator is a combatant under such command chain, it is necessary that the commanders or other superiors are responsible for the acts of the operator.[74] In case the commander orders an attack, he or she must ascertain that the attack does not constitute any war crime, since the commanders are responsible for crimes committed pursuant to their orders. The operator as a subordinate must refuse to obey an order that he or she knows to be illegal, or that should be known to be illegal due to the manifest illegality.[75]

In normal cases, where the drone is manually operated and works as expected, the responsible persons are easy determine, at least in theory. The individual who commits a war crime is responsible for that.[76] This is applicable to a drone operator who commits a crime, such as the act of launching an attack that is expected to cause excessive damage to civilians. Commander is responsible for the crimes committed in accordance with their orders.[77] Where the operator launches an unlawful attack without straight order, the commander would not be responsible for ordering the attack, but instead, their responsibility would concern their failure to exercise power and precautions concerning the subordinates.[78] Where the commander learns that their troops have committed a crime, the commander should take the best efforts to limit the crime, prevent it in the future, and submit the occurred case for further investigation and prosecution.[79] The superior responsibility is seen to be enforced in customary international humanitarian law in ad hoc tribunals effectively.[80] However, the national efforts do not follow the same standard, as e.g., the U.S. has improved in prosecution related to direct unlawful orders, but remained unwilling to intervene to commanders' failure to prevent crimes from occurring.[81] There is a problem on how the legality is monitored and justified at international and national level.

However, the question remains, whether both, the commander and the operator, should be certain on the legitimacy, or to which extend they should be able to rely on the other person's

[74] ICRC, Customary IHL Database, rules 152 and 153. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule152, https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule153, 12 December 2020.
[75] ICRC, Customary IHL Database, rule 154. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule154, 12 December 2020.
[76] ICRC, Customary IHL Database, rule 151. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule151, 12 December 2020.
[77] ICRC, Customary IHL Database, rule 152. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule152, 12 December 2020.
[78] ICRC, Customary IHL Database, rule 153. Retrieved from https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_rul_rule153, 12 December 2020.
[79] *Ibid.*
[80] McCarthy, A. H. (2018). Erosion of the rule of law as basis for command responsibility under international humanitarian law. *Chicago Journal of International Law,* 18(2), 553-593.
[81] *Ibid.*

responsibility to ascertain the legality of the attack. The usage of intelligence by other groups, and the assistance of legal personnel, bring additional persons to this complex decision-making process, and amplifies the risks related to mutual trust. There is a suggestion that where the intelligence provides miscalculated information, leading to the following decisions made with trust in the intelligence, and execution of an attack, the responsibility could be avoided by all the intelligence, commanders and the operator.[82] This scenario is based on the original mistake by the intelligence, and layman's idea would impose the responsibility on the intelligence. The subjective-objective test that was presented above could help with addressing the responsibility on intelligence, as well as other persons. However, there remains the possibility of not being responsible. The notable problem is with the fact that the unlawfulness in proportionality is determined as depending on the knowledge on the possible occurrence of civilian casualties, not the fact that they actually occur. Also, the principle of precautions obliges constant care, but as to the practice, it requires only "feasible" means, leaving again the scope of the obligation rather unclear and thereby favourable to the attacker. The Commentary of 1987 to the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977, provides that there were long discussions regarding the selection of words "everything feasible", and that in the end the interpretation would depend on good faith and common sense.

In case that there is a malfunction in a drone, the responsibility of the users can be more limited. Where an individual programmer programmed it to commit war crimes with intention and knowledge, and the system is used by the user in good faith, the programmer might be considered as committing a crime as "indirect perpetrator".[83] Where the user knows about the defect, he would be liable, and the programmer would be an accessory to the war crime.[84] The case is different where the malfunctions are not created with knowledge or intent. Where the manufacturer has warned the user for potential malfunctions, they are likely to not to be held liable.[85] Instead, the responsibility is transferred to the party that uses the weapon and on the persons responsible for

[82] Grzebyk, P. (2017). Who can be killed?: Legal Targets in Non-International Armed Conflicts. In: S. J. Barela, *Legitimacy and drones: investigating the legality, morality and efficacy of UCAVs* (49-70). London: Routledge.
[83] Sassòli, M. (2014). Autonomous weapons and international humanitarian law: Advantages, open technical questions and legal issues to be clarified. *International Law Studies / Naval War College, 90*, 308-340.
[84] *Ibid.*
[85] Zerbe, Y. (2019). Autonomous weapons systems and international law: Aspects of international humanitarian law, individual accountability and state responsibility. *Swiss Review of International and European Law, 29(4),* 581-606.

the decision on selection and deployment of the weapon – including the commander, and even higher commanders and political decision-makers.[86]

In the book of Arkin R. C. *Governing lethal behavior in autonomous robots* (2017), the study examines the possibility of creating and implementing a role of "responsibility advisor", who could specifically address the issues of the usage of automated weapons systems, and set a human being responsible for any use of lethal force.[87] The idea is good, and could be applied by military forces as a supporting tool to strive against responsibility problems.

3.3 Establishing responsibility for killings with autonomous drones

The automation and the autonomous operation of drones arise different questions, as to the responsibility for undesirable outcomes committed by autonomous system. Where such system is applied, the operator starts the operation, but does not engage, or engages limitedly, to decision-making during the operation. The same applies to the commander ordering the usage or supervising his or her subordinates – after the system is applied, there might not be a possibility to affect its actions after that. One element that must be considered is the acceptance of a risk related to any weapons system, and the actions of subordinates. In the end, the rules are the same as in the previous sub-chapter 3.1.2. The responsibility may be on the operators, commanders, higher commanders and political decision-makers, and the programmers of the systems. The difference is that the standard of care is not applied in real time to automated operations, but basically these things must be ensured beforehand. However, the discussion on responsibility gaps, as presented next, causes uncertainty as to the establishment of individual criminal responsibility.

There are academics, who assert that where the drones use artificial intelligence in their operations, there might not be a person who could be held responsible[8889] The argumentation for the existence of such responsibility gaps build around the logic, that where the machine acts as the manufacturer specifies, the user is responsible for the usage, and where the machine has some defect in it, the manufacturer is responsible, but in case of artificial intelligence develops functions that are not

[86] Geiß, R. (2015). *The International-Law Dimension of Autonomous Weapons Systems*. Berlin: Friedrich Ebert Stiftung Study.
[87] Arkin, R. C. (2009). *Governing lethal behavior in autonomous robots*. Boca Raton: CRC Press/Taylor & Francis Group.
[88] Matthias, A. (2004) The responsibility gap: Ascribing responsibility for the actions of learning automata. *Ethics Inf Technol*, 6**,** 175–183.
[89] Sparrow, R. (2007). Killer Robots. *Journal of Applied Philosophy*, 24(1), 62–77.

caused by defect but are not under the control of the user, none of them can be held responsible for the following reasons.[90] The central part of manufacturing process is the programming of the software, which is done by the programmer, who creates a program where the possible errors that can be found and fixed.[91] However, the programmer of an artificial intelligence is not a pure programmer anymore, but a different kind of creator, since the learning process of the artificial intelligence is not anymore under an effective control of the creator.[92] Thus, where the machine learns, there is no person -programmer or flight operator- who would have an effective control or real possibility to supervise the operations of the machine, which are a requirement for the responsibility, i.e. the academics suggesting the existence of the responsibility gaps keep the control or even strong control as a condition for responsibility.[9394] However, the weakness of this reasoning, and the counter arguments for this requirement are addressed well by Nucci and Sio, as they argue that the actual actions are not determined solely by the orders, but there is always the possibility of ignorance, negligence and bad luck affecting the consequences.[95] The argument requiring strict control is weak, because it would negate the responsibility in most of the cases where external factors have affected the outcome.[96] Other argumentation suggests that the direct attribution of the acts of an autonomous machine to a specific person is rather unattainable, but it does not exclude the more general commander responsibility.[97]

As said, one problem is the requirement of effective control or meaningful human control. One improvement possibility would be to relax this requirement, but it would need closer research to know whether it is possible with interpreting the already existing articles or whether it would need new codification. Another point of view is that there seems to be consensus on the requirement to keep the most critical decisions under human control, thereby prohibiting the completely autonomous systems and allowing the automation only to some degree.[98] Thus, the future research and improvements should, and are likely to, concentrate on defining those most critical decisions.[99]

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[90] Matthias (2004), *supra nota* 88, 175–183.
[91] *Ibid.*
[92] *Ibid.*
[93] Sparrow (2007), *supra nota* 89, 62–77.
[94] Matthias (2004), *supra nota* 88, 175–183.
[95] Nucci, E.D., & Sio, F.S (Eds.). (2016). *Drones and Responsibility: Legal, Philosophical and Socio-Technical Perspectives on the Use of Remotely Controlled Weapons. Emerging Technologies, Ethics and International Affairs*. Oxon; New York: Routledge.
[96] *Ibid.*
[97] Stewart, D. M. (2011). New technology and the law of armed conflict. *International Law Studies*, 87(1), 12, 271-298.
[98] Petman, J. M. (2017). Autonomous Weapons Systems and International Humanitarian Law:'Out of the Loop'?. Helsinki: The Eric Castren Institute of International Law and Human Rights.
[99] *Ibid.*

This discussion should be productive soon, since there is no fully autonomous systems yet, but the automation is developing rapidly and the standards are easier to enforce when they exist before the weapon.

Regarding the suggestions that instead of people, the machines should be responsible, it does not seem like a feasible possibility in present society. The machines cannot be given a status of a legal agent in the current world, because the peoples' understanding of a legally responsible agent presumes the capacity of autonomous reasoning i.e. the idea that machines are authors of their own actions, which is not the case in the current perception of people.[100]

3.4 Procedural and other further problems in establishing the individual criminal responsibility

When searching for criminally liable person from the drone operators where they have caused damage to civilians, the process to establish the responsibility is not simple. It must consider that the material elements of a war crime were fulfilled, e.g. the attackers made an attack that caused deaths which are prohibited by Geneva law, or other laws and customs of war. However, also providing evidence about the circumstances, such as the verification of the deaths and the civilian status of the dead persons, is necessary for the accusation to succeed.[101] Providing the circumstance element requires sufficient investigation, which however is often impossible due to the remoteness of the locations, causing that that in practice, the investigations are not completed and there is a failure to provide the needed circumstance element.[102]

When the responsibility lays on multiple persons, the role of each of them is determined, whether it is a direct commission of a crime, ordering it, assisting in it etc. For example, the operator can be held directly responsible for committing a crime. The mental element of the persons is considered through their intention to carry out the material elements, and whether they were aware of the consequences. The ICC's requirement for *dolus directus,* is not easy to fulfil with automated weapons, since most of the consequences caused with automated weapons could be rather lower level dolus, mainly *dolus eventualis*.[103] In most of the national legal systems, the *dolus eventualis*

[100] Brożek, B., Jakubiec, M. (2017). On the legal responsibility of autonomous machines. *Artif Intell Law,* 25, 293–304.
[101] Grzebyk (2017), *supra nota* 82, 49-70.
[102] *Ibid.*
[103] Malik, S. (2018). Autonomous weapon systems: The possibility and probability of accountability. *Wisconsin International Law Journal,* 35(3), 609-642.

is enough for prosecution.[104] It is suggested that regarding the dolus in responsibility, even internationally, the responsibility can be established if there is good consensus on the sufficiency of *dolus eventualis*.[105] However, this leads to another problem, which is the lack of capacity of the international community, leaving the prosecution for States, which might be unwilling to control their own military operations. Where there is no international actor capable of enforcing IHL, it seems unattainable that all the States would enforce good standards by themselves. The critique asserts that the accountability for targeted killings require that the procedural safeguards and the legal basis for targeted killings are provided transparently, and there is a shortage of transparency.[106]

Also, there are problems with definitions, e.g. when defining the proportionality, a "concrete and direct military advantage" is not a clear standard. This is both a problem with the rule, as well as a problem in procedure. The first dimension was discussed already, but regarding the problem in procedure, it is good to elaborate. The problem is that where the rule gives too unclear order, it is likely to be rather favourable for the accused according to the principle of legality. The principle *in dubio pro reo* protects the accused in case there are any doubts regarding the responsibility, making the process of establishing responsibility even harder. These definitions and standards are a question that would require more examination, not possible to include in this paper. Anyway, they constitute a problem in criminal proceedings.

These problems, especially the problem of collecting evidence, are hard to solve. Requiring documentation by the attackers could solve some problems, but mainly, those would still depend on the good will and transparency of the attacker in its operations, and if used in trials, such documentation would be easy to manipulate. Strong obligations and control mechanisms would be hard to implement. It is possible that the evidence collection would be best organized by some State organs, non-profitable, or even commercial organizations, but the lack of resources hinders the realization of such solutions. As to the incapability of international community to enforce the laws and to establish criminal responsibility, and the unwillingness of States to give up their unlawful practices, these remain as permanent problem of international law, that seems possible to change only through enhanced cooperation.

[104] *Ibid.*
[105] *Ibid.*
[106] Sandvik, K. B., & Jumbert, M. G. (2018). *The good drone*. London: Routledge.

CONCLUSION

The aim of this research was to answer to the question: Does the contemporary law serve effectively the objective to establish responsibility for the crimes of killing of civilians with drones? The answer was discussed and derived through the studies and considerations presented in the main chapters of this research paper.

IHL regulates the lawfulness of attacks and killings in armed conflicts. Killing of civilians is unlawful in most of the cases and should lead to individual criminal responsibility of persons that have caused the death. This is applicable also to the usage of drones, with which civilians are killed excessively. The specific features of drones – automation, distance, multiplicity of decision-makers – make drones interesting regarding the responsibility questions. In the usage of drones, the operator, command chain, and the programmers of drones might be held criminally responsible for killings of civilians. However, there are certain problems that undermine the protection of civilians.

The current legislative text does not provide clear standard for the precautions, or for the understanding of some definitions, such as the definition of principle of precautions referring to "all feasible precautions". Even with the subjective-objective-test, that provides the two central elements for determining such standards, the current prohibitions and obligations do not set as high and clear standard for the attackers as they should. To improve the situation, such standards should be inculcated.

The narrow definition of armed forces and combatants exclude some remarkable actors outside of its scope problematically. The applicability of the IHL on all the drone operators using lethal force behalf of a State in an armed conflict should be confirmed. As long as there are different suggestions to exclude such State actors outside of the definition of armed forces, there remains uncertainty and inefficiency of IHL and ICL. The problem might be the preservation and inflexibility of the traditional definition of armed forces. Even though it would be suggested that customary law includes also forces outside the armed forces if they are part of command structure,

that is not a definition accepted by all states, since it is not part of globally ratified treaties, and some treaties provide narrower definition. Humanitarian efforts would benefit greatly from enlarging the definition of armed forces and combatants to cover the persons in modern military operations.

With autonomous drones, the requirements for individual criminal responsibility might not be fulfilled, if the requirement of control is maintained in strict sense. Problems arise where the attack leads to excessive damage to civilians, but it is hard to determine individual criminal responsibility where the person assures that there was no intention to damage the civilians and the person did not know that such damage would occur, and therefore there is no *mens rea*, which is one key requirement for individual criminal responsibility. The main procedural problems with drones concern the problems in acquiring evidence, safeguards of the prosecuted persons, and the lack of capacity of the international community. In addition to the challenges in the prosecution, especially the failure to provide proper investigations, there is critique about the lack of information and transparency in the whole process of the usage of armed drones.

For future research, the concept of meaningful human control as a requirement for individual criminal responsibility could be examined further. That would be useful to understand whether it can include automated systems with interpreting the already existing laws flexibly or whether it would need new codification.

Overall, it can be concluded that the protection of civilians through IHL rules and enforcement of individual criminal responsibility is not unproblematic and the current legislation does not provide as high safeguards for civilians as it should regarding the legitimate interests of the civilians. There is insufficiency in the protecting rules, as well as in establishing the responsibility. The situation could be improved, e.g., though clarification of standards, and application of modern definition of armed forces and combatants. Promotion of international cooperation and discussing the rules for emerging new technologies before they cause problems, are key tools for keeping up and improving the enforcement of laws and establishment of criminal responsibility where needed.

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