MEHMET AKİF ERSOY ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ DERGİSİ
Mehmet Akif Ersoy University Journal of Social Sciences Institute

e-ISSN: 1309-1387
Sayı/Issue: 36
Yıl/Year: 2022
ss./pp.: 76-94

POSITIVE HUMAN RIGHTS OBLIGATION OF STATES AND THE USE OF AUTONOMOUS WEAPON SYSTEMS DURING LAW ENFORCEMENT OPERATIONS

DEVLETLERİN POZİTİF İNSAN HAKLARI YÜKÜMLÜLÜĞÜ VE KOLLUK OPERASYONLARI SIRASINDA OTONOM SİLAH SİSTEMLERİNİN KULLANIMI

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Makale Türü Araştırma Makalesi

Article Type Research Article

Başvuru Tarihi/Appliation Date 11.07.2022

Yayına Kabul Tarihi/Acceptance Date 26.09.2022

DOI 10.20875/makusobed.1143071

Abstract

Autonomous weapon systems are artificial intelligence-based, modern weapon systems that can identify and destroy targets without meaningful human intervention. In this article, human rights violations that may occur in case of widespread use of autonomous weapon systems in law enforcement operations in the near future will be examined and the positive obligations of states will be determined. States' positive human rights obligations in line with the United Nations, Basic Principles on the Use of Force and Firearms by Law Enforcement Officials, can be listed as weapon selection and the duty of precaution, the official training of law enforcement officers, procedural obligation, the right to explanation and the right not to be subject to completely automatic decisions. The research results of this article offer that, in line with the existing case law of human rights courts, autonomous weapon systems cannot comply with the positive obligation on the right to life.

Keywords: *Autonomous Weapon Systems, International Human Rights Law, Positive Obligations.*

Öz

Otonom silah sistemleri, anlamlı bir insan müdahalesi olmaksızın hedefleri belirleyip yok edebilen, yapay zekâ temelli modern silah sistemleridir. Bu makalede, yakın gelecekte otonom silah sistemlerinin kolluk operasyonlarında yaygın olarak kullanılması durumunda meydana gelebilecek insan hakları ihlalleri incelenerek, devletlerin pozitif yükümlülükleri belirlenmeye çalışılacaktır. Devletlerin pozitif insan hakları yükümlülükleri; Birleşmiş Milletler Kolluk Görevlileri Tarafından Güç ve Ateşli Silah Kullanımına İlişkin Temel İlkeler doğrultusunda silah seçimi ve tedbir görevi, kolluk kuvvetlerinin resmi eğitimi, usul yükümlülüğü, açıklanabilirlik hakkı ve tamamen otomatik kararlara tabi olmama hakkı olarak sıralanabilir. Bu makalenin araştırma sonuçları, insan hakları mahkemelerinin mevcut içtihat hukuku doğrultusunda, otonom silah sistemlerinin yaşam hakkına ilişkin pozitif yükümlülüğe uyamayacağını öne sürmektedir.

Anahtar Kelimeler: *Otonom Silah Sistemleri, Uluslararası İnsan Hakları Hukuku, Pozitif Yükümlülükler.*

To cite this article:
Akkuş, B. (2022). Positive human rights obligation of states and the use of autonomous weapon systems during law enforcement operations. *MAKU SOBED*, (36), 76-94. https://doi.org/10.20875/makusobed.1143071

GENİŞLETİLMİŞ ÖZET

Çalışmanın Amacı

Son yıllarda, otonom silah sistemlerinin etik, insani, hukuki ve güvenlikle ilgili sonuçları hakkında artan tartışmalar devam etmektedir. Otonom silah sistemlerinin selefi olarak nitelendirilebilecek drone teknolojisi; silahlı çatışmaların yanında, kalabalıkların kontrolü, sınır izleme, kişiye özel saldırılar gibi pek çok alanda aktif olarak kullanılmaktadır. Bu çalışma, sadece silahlı çatışma ekseninde araştırmalarla sınırlı kalan otonom silahların, kolluk kuvvetlerince kullanılması durumunda devletlerin pozitif yükümlülüklerinin neler olduğunu belirleyerek uluslararası hukuka uygun kullanılmaları için önerilerde bulunacaktır.

Araştırma Soruları

Bu makalede kolluk kuvvetlerince kullanılan otonom silah sistemlerinin, devletlerin pozitif insan hakları yükümlülükleriyle uyumlu olup olmadığı sorusuna yanıt aranacaktır. Devletlerin pozitif insan hakları yükümlülüklerini tespit etmek için Birleşmiş Milletler Kolluk Görevlileri Tarafından Güç ve Ateşli Silah Kullanımına İlişkin Temel İlkeler bağlayıcı olmayan dokümanı kullanılacaktır. İnsan haklarının korunmasının sadece ülkenin sınırları ile kısıtlanması yaklaşımı tartışılarak; bölge dışı insan haklarının korunmasının mümkün olup olmadığı insan hakları mahkemeleri içtihatları doğrultusunda araştırılacaktır.

Yöntem

Makalenin araştırma sorusuna nicel, nitel veya karma metodolojiler kullanılarak yaklaşılabilir. Otonom silah sistemlerinin hem uluslararası insan hakları hukuku hem de uluslararası insancıl hukukun konusu olması dolayısıyla, özellikle uygun olan yaklaşım olarak bu konuyu farklı açılardan incelemenin daha iyi araştırma sonuçları vereceğini göstermektedir. Sosyo-hukuki ve doktriner yaklaşımlar, otonom silah sistemleri ile ilgili daha iyi hukuki analizler sağlamayı amaçlayan araştırmayı planlamada önemli bir konudur.

Hızla gelişen bu teknoloji güdümlü uluslararası hukuk alanında kişisel mülakatlar, anketler, otonom araç testi mükemmel araştırma kaynakları sağlayabilir ve mevcut literatüre değerli katkılar sağlayabilir. Şüphesiz bu yararlı nicel yöntemler bu çalışmada iki nedenden dolayı önerilmemektedir. İlk olarak, veri toplama süreçlerini tasarlamak ve yürütmek önemli masrafları beraberinde getirmektedir. İkinci olarak, önemli birincil kaynakların zenginliği nedeniyle özellikle güncel uluslararası hukuk belgeleri ve davaları üzerinde kaliteli araştırma önerilerinin ve sonuçlarının oluşturulabileceği açık olduğundan, bu araştırmayı ilerletmek için daha uygun olarak nitel bir metodoloji önerilmektedir. Bu metodolojide belirlenen tek önemli nitel araştırma zorluğu, 2014'ten bu yana çeşitli otonom silah sistemleri ve uluslararası hukuk sorunları hakkında büyük ve hızla genişleyen bir literatürden en iyi kaynakları seçmektir.

Literatür Araştırması

Otonom silah sistemlerine ilişkin akademik literatür, ağırlıklı olarak bu silahların neden yasaklanması gerektiğini uluslararası insancıl hukuk ilkeleri doğrultusunda incelemektedir. Martens kaydı ve etik endişeler yasaklamanın gerekçesi olarak sunulmaktadır. Yaşam ve ölüm kararı bir makine yerine sadece insanlar tarafından verilmelidir. Otonom silah sistemlerinin kullanılması durumunda yapay zekânın uluslararası ceza hukuku açısından sorumluluğu literatürde üzerinde durulan bir diğer konudur. Bu çalışma ise alanda fazla inceleme bulunmadığından uluslararası insan hakları hukuku açısından otonom silah sistemlerine odaklanmaktadır. Silahlı çatışma odağından artan incelemelere rağmen bu çalışma, kolluk kuvvetlerinin operasyonlarına ağırlık vererek araştırmanın orijinalliğini ve literatüre katkısını artırmayı amaçlamaktadır. Otonom silah sistemlerini insan hakları hukuk açısından inceleyen çalışmalar yaşam hakkı ve mahremiyet hakkı üzerine odaklanırken bu çalışma devletlerin pozitif yükümlülüklerine odaklanarak alana katkı sağlamayı amaçlamaktadır. Otonom silah sistemlerinin ülke dışı insan haklarının korunması açısından incelenmesi ise literatürde hiç çalışılmamış bir alandır.

Sonuç ve Değerlendirme

Anlamlı insan kontrolünün korunduğu yerde, makine otonomisi insan otonomisini artırabilir, ancak aynı zamanda bu, daha yüksek düzeyde insan kontrolü olduğu için güç kullanımı konusunda daha yüksek sorumluluk standartları uygulanması gerektiği anlamına gelir. Bununla birlikte, tamamen otonom silahlar anlamlı bir insan kontrolü gerektirmez ve sonuç olarak bu tür silahların kolluk kuvvetlerinde hiçbir rolü olmamalıdır.

1. INTRODUCTION

Scholars are paying an increasing amount of attention to the impact of autonomous weapon systems (AWS) on international human rights law (IHRL) (Heyns, 2016). Whilst most texts focus on the context of an armed conflict recognizing the fundamentally military purpose of the technology. However, such systems may be used for law enforcement purposes, with IHRL providing the only applicable regime.

In fact, the predecessors of AWS – armed drones – are regularly used for the purposes of extraterritorial targeted killings, border policing and crowd control. The main difference between drones and autonomous weapon systems emerges at the stage of determining the life and death decision. In unmanned military drones, life and death decisions are made remotely by a human operator, while in autonomous weapon systems, this decision is determined by algorithms. This article will consider AWS operation solely in those scenarios relevant to current unmanned systems. It will not consider legal issues surrounding the qualification of relevant operations, and will certainly not endeavor to do so for targeted killings. In theory, AWS will operate according to a system of pre-coded algorithms, enabling them to make specific decisions in certain environments. This is known as algorithmic target construction (ATC). Given that AWS will be able to use lethal force against human targets, it can be assumed that these systems will perform a pre-screening of their operating environment and any related objects or individuals. In doing so, they will collect a specific set of data. Later in the operation, this data will be used to inform their decision-making deciding to shoot, or not shoot, for example. In a wider process of digitalization, it is most likely that automated data-processing and widespread surveillance will form part of future law enforcement operations.

This article will consider the positive obligations of a state when it uses lethal force against human targets and will examine law enforcement situations, whether domestic or extraterritorial. The topic – sometimes called the "law of law enforcement", (The Academy of International Humanitarian Law and Human Rights, 2016, p. 5) in a disputable, incomplete approach – currently comprises the interpretations of treaty law provided by relevant monitoring bodies, and the general principles and customary norms of law, largely reflected in the 1979 Code of Conduct for Law Enforcement Officials[1] and the 1990 Basic Principles on the Use of Force and Firearms by Law Enforcement Officials (UN Basic Principles).[2] Although these principles have no binding force, *per se*, they have been referenced by monitoring bodies in a number of cases. As such, some of their key provisions on the use of force have become somewhat customary (Maslen, 2014, p. 16).

2. POSITIVE OBLIGATIONS

The concept of positive obligations refers to the measures that states must take to ensure the protection of a right. These include respecting human rights, taking action to protect rights, and taking judicial measures. The measures taken must be reasonable and appropriate. For example, measures taken in detention centers to prevent illegal migrants from committing suicide and punishment of state officials who mistreat illegal migrants (Gould & Shelton, 2013, p. 564). The concept of negative obligations refers to inaction. The state refrains from actions that would violate human rights. Examples of negative human rights obligations of states include not returning illegal migrants arriving by sea to their countries of origin where there is a risk of danger to life and persecution, or making regulations that prevent the obligation to push back ships carrying illegal migrants (Scovazzi, 2014, p. 251).

Positive and negative obligations should not be considered mutually exclusive state responsibilities. Indeed, in some cases, positive obligations can be seen as inherent in the negative ones (Verein Gegen Tierfabriken Schweiz (Vgt) v. Switzerland (No. 2), 2009). In fact, these obligations fit together in such a way that protecting the right to life becomes both practical and effective. For this reason, it has been said that "[w]hen lethal force is used within a policing operation by the authorities it is difficult to separate the State's negative obligations … from its positive obligations" (Finogenov and Others v. Russia, 2012, p. 208). With a duty to respect and ensure the right to life, states take on a complicated set of responsibilities. In accordance with Inter-American Court of Human Rights (IACtHR) results, (Caso Velásquez Rodríguez vs Honduras, 1988, p. 166) these responsibilities can be categorized as either a duty of precaution, or a duty of investigation.

[1] Adopted by UN General Assembly Resolution 34/169 of 17 December 1979.

[2] Adopted by the Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders, Havana, Cuba, 27 August-7 September 1990.

2.1. Weapon Choice and The Duty of Precaution

The principle of precaution means that public authorities must plan their law enforcement activity in such a way that they reduce the risk of depriving life (Jensen, 2020, p. 586). This precaution thus operates with such considerations made before the use of lethal force, and in seeking to reduce the need for it.

The famous *McCann* case marked the first European Court of Human Rights (ECtHR) assertion of the positive obligation for precaution (McCann v. the United Kingdom, 1995). This case saw the Court assess an SAS shooting in Gibraltar that targeted three IRA members suspected of possessing a remote detonator for a nearby bomb. The Court found that the UK authorities had not taken "appropriate care in the control and organization" of the mission, thus violating the IRA members' right to life (McCann v. the United Kingdom, 1995, p. 212). Indeed, a number of other human rights organizations also insist that precautionary rules are respected when planning to use force against human targets (Nadege Dorzema et al v Dominican Republic, 2012, p. 87). The principle of precaution sits at the very heart of the UN Basic Principles.

The precautionary obligation also addresses the matter of weapon and ammunition choice. If arms are regulated and their employment is cautious, this is seen to indicate a democratic society (Thurnher, 2018, p. 101). In fact, the decision to use one weapon over another affects both the positive and negative obligations concerning the right to life. Naturally, using a contextually inappropriate weapon raises concerns about precaution, proportionality, and necessity (Winter, 2022, p. 18).

According to the UN Basic Principles, to ensure a differentiated use of force, state officials must possess sufficient equipment and, specifically, alternatives to firearms.[3] In terms of specific weapon and ammunition choices, human rights organizations have provided detailed case law. Established within the framework of the Human Rights Council, the Commission of Inquiry in Syria has published reports that condemn IEDs, chemical and thermobaric weapons, missiles, cluster munitions, barrel bombs, shelling, and fragmentation mortar bombs, and snipers (Independent International Commission of Inquiry on the Syrian Arab Republic, 2017). Indeed, the HRC (UN Human Rights Committee: Concluding Observations: Israel, 1998, p. 17) and IACmHR (Santo Domingo Colombia, 2003) have handled corresponding cases concerning the state agent use of powerful weapons.

The ECtHR has delivered an indicative case law in this area (Schabas, 2015, p. 153). Its first conclusion is that the use of indiscriminate weapons typically contravenes the obligation to take "all feasible precautions with a view to avoiding and, in any event, minimizing, incidental loss of civilian life" (Tagayeva and Others v Russia, 2017, p. 573). The *Isayeva* case, for example, found that the use of "heavy combat weapons"—including Russian air launched FAB-250 and FAB-500 explosive bombs—to strike the village of Katyr-Yurt (Chechnya) did not fulfil the duty to act "with the requisite care for the lives of the civilian population" (Isayeva v. Russia, 2004, p. 179). More recently, the *Tagayeva* case examined the use of flame throwers, grenade launchers, and tank cannons. In this case, the Court concluded that although the use of lethal force can, in some circumstances, be justified such as those in which a terrorist group are holding hundreds of people hostage in a school, the use of indiscriminate weapons does violate the right to life (Tagayeva and Others v Russia, 2017, p. 611). Its second conclusion is that the results for less lethal weapons may differ. For example, the *Finogenov* case found that the use of incapacitating gas to end a hostage situation in Moscow's Dubrovka theatre did not violate the proportionality principle as, "while dangerous", the use of this gas "was not supposed to kill, in contrast, for example, to bombs or air missiles" and, further, "left the hostages a high chance of survival" (Finogenov and Others v. Russia, 2012, p. 232).

Additional Protocol I does not contain any definition of what constitutes weapons and weapon systems. According to the US Department of Defense, a weapon can be defined as "chemical weapons and all conventional arms, munitions, materiel, instruments, mechanisms, or devices which have an intended effect of injuring, destroying, or disabling enemy personnel, materiel or property." (Chengeta, 2017, p. 73) Australia defines a weapon as "an offensive or defensive instrument of combat used to destroy, injure, defeat or threaten. [The term] includes weapon systems, munitions, sub-munitions, ammunition, targeting devices, and other damaging or injuring mechanisms." (International Review of the Red Cross, 2006, p. 933) Boothby defines a weapon as a device, instrument, substance or piece of equipment, the most important characteristic of which

[3] See *the 1990 Basic Principles on the Use of Force and Firearms by Law Enforcement Officials* Adopted by the Eighth United Nations Congress on the Prevention of Crime and the Treatment of Offenders, Havana, Cuba, 27 August-7 September 1990.

is that it is a tool used against the enemy to accomplish military objectives (Boothby, 2009, p. 4). In line with the definitions of academics and states, it can be concluded that there are three main elements of a weapon. These are the ability to inflict direct harm and the presence of defence mechanisms, the inclusion of weapon systems and the ability to be used by a subject.

Weapons have been used by people throughout history. As a result of the changing nature of warfare, it would be right to consider weapon systems themselves as weapons. Many definitions of weapons include weapon systems. However, a weapon system is not really a weapon but a means of delivering a weapon. An attack aircraft, for example, can be considered a weapon or a weapon system. Categorizing autonomous weapon systems is problematic in two respects. First, the level of human control over the system can affect the classification of the machine. An autonomous system cannot be considered part of a weapon system if the human operator has control of the system up to the point of intermediation between the weapon platform and the system. As such, it cannot be characterized as a weapon. Secondly, an autonomous element can be considered as part of a weapon system if it streams data to the weapon system. The link between an autonomous machine and the harm inflicted on fighters is becoming weaker and weaker. Therefore, the task performed by the machine must be identified. For example, a drone that uses autonomous navigation to carry cargo is not a weapon, but a drone that uses autonomy to select targets and attack them can be considered a weapon.

Applied to the AWS context, this would surely indicate that, as *sui generis* weapons, AWS are not indiscriminate. Firstly, although it is likely that AWS will bear firearms, they could be furnished with different, interchangeable, and less lethal weapons. What is unique about AWS, however, is that these systems are equipped with software that permits them to make independent decisions on whether or not to use lethal force against a human target. With this in mind, the technological objection would claim that AWS cannot fulfil a state's positive obligation to select proportionate weapons, as such systems would not be able to apply lethal force to permissible targets. Were an AWS created that was able to make this distinction in the same way that a human would (e.g. shooting a terrorist who is about to detonate a bomb and causing no collateral damage), then the positive obligation would be met.

2.2. Law-Enforcement Official Training: The Duty to Educate

The UN Basic Principles stipulate a requirement for the "qualifications, training and counselling"[4] of law enforcement officials expected to use force. Specifically, they stipulate a requirement for "completion of special training" in firearm use.[5] During such training, officials must carefully observe "issues of police ethics and human rights", as well as "alternatives to the use of force and firearms".[6]

Some previous incidents have, according to human rights bodies, shown a lack of appropriate training for law enforcement officials. As a result, the ECtHR stated, for example, that military policemen must have sufficient training to determine whether the use of firearms is absolutely necessary, "not only on the basis of the letter of the relevant regulations, but also with due regard to the pre-eminence of respect for human life as a fundamental value" (Nachova and Others v. Russia, 2005, p. 97).

To determine whether AWS can comply with this obligation, one must first establish whether an AWS could be considered a law enforcement official, in terms of the requirement to be educated and trained. The UN Basic Principles presume that a law enforcement official has human agency. The same is true of other human rights provisions, as understood by the relevant monitoring bodies. They assume that those asked to use lethal force against human targets are also humans themselves. An AWS, conversely, separates the specific use of force from human decision making. If an AWS does decide to use lethal force, however, it is then classified as a law enforcement official.

In light of the increasing levels of autonomy that are being incorporated into weapon systems, in particular those that perform critical functions, at what point does the machine progress from being a weapon to a robo-combatant that is subject to international law as opposed to an Article 36 evaluation.

Dinniss and Kleffner were of the view that an organism becomes more robotic and less human when human body parts are replaced with robotic parts: "that if we want to say that robots are weapons subject to

[4] See *the 1990 Basic Principles on the Use of Force and Firearms by Law Enforcement Officials.* § 18.
[5] See § 19.
[6] See § 20.

Article 36 review but humans are not therefore not subject to Article 36 review." (Dinniss & Kleffner, 2016, p. 434)

This same continuum could be applied to autonomous weapon systems. The more autonomous a robot becomes, the more it starts to resemble a human. Critical functions were once the sphere of human fighters; as such, the more critical functions a machine can perform, such as making decisions as to who to attack, the more the machine progresses from being a robot to a fighter.

Considering this, it is important to develop an in-depth understanding of what a weapon is and how it can be discerned from a fighter or combatant from the perspective of the functions that it is legally permitted to perform within the confines of international law. Developing such a clear understanding will be imperative to ensuring the appropriate application of the rules that underpin international humanitarian law.

Human fighters are subject to international humanitarian laws of targeting; for example, those related to distinction and proportionality. However, if we were to apply these same laws to robots, we would essentially accept that autonomous weapon systems represent combatants in their own right. This could have very serious implications. As such, we need to ask the following question: To what extent can we view robots as combatants within international law and is the international community prepared to accept robo-combatants?

According to existing international law (Kanwar, 2011, p. 13), robo-combatants cannot legally use force because the use of force is reserved for human beings who are sound of mind, capable of taking responsibility for their actions, and of the required legal age. Even if an individual can fight within the legal requirements, he or she is not necessarily a lawful combatant. For example, children may comply with the legal description of a fighter; however, the use of children as fighters in armed conflict situations is expressly prohibited. Similarly, the rebel soldiers who engage in armed conflict in accordance with laws of war can still be prosecuted by the state on the pure basis that they have attacked that state.

If weapons that have a high degree of autonomy or are fully autonomous can not be considered to represent legal combatants under international law, then the rules that apply to fighters cannot be cited when attempting to justify their use. This author is of the opinion that AWS should not be adopted into the existing framework of weapons or accepted as combatants. This perspective is reflected in the Campaign to Stop Killer Robots, which describes AWS that can perform critical functions that involve making decisions related to human life as Killer Robots (Galliott et al., 2016).

Existing investigations and definitions are almost completely devoid of any examination of the legalities surrounding how weaponry or weapons systems may take over target selection, something traditionally accomplished by humans acting in accordance with the relevant rule. Thus, we must go further than examining legal definitions and look at extant international humanitarian laws and how new autonomous weaponry might come under its aegis.

Heather Roff pointed out that when using AWS, "the weapon is also the combatant, and the decision to target and fire lies with the machine, and, these machines would amount to individual commanders, and as well as Judge Advocate General officers, weaponeering officers and intelligence officers, on a battlefield." (Roff, 2013, p. 212) The view that AWS would assume human capacities has also been put forward by Human Rights Watch: "While traditional weapons are tools in the hand of a human being, fully autonomous weapons would make their own determinations about the use of lethal force." (Human Rights Watch, 2014, p. 8) These statements, and others like them, offer the view that AWS are not tools employed by humans, they legally replace humans.

The chief concern regarding AWS is that it might not be possible to hold an individual to account for an illegal act undertaken by AWS; this assumes that AWS assume the guilt for any illegality that normally would fall upon a human being. There are currently no difficulties in international humanitarian law or international criminal law in placing responsibility for illegal acts committed with weaponry on the person operating weaponry. If AWS make it impossible to allocate such responsibility, they clearly have entered a new category above and beyond what is commonly understood to represent weaponry.

It takes a considerable stretching of definitions to see AWS as the legal equivalent of human combatants; however, on the surface, the equivalency can be drawn. It cannot be denied that the software that current controls AWS, and that which may control it in future, undertakes target selection tasks which, when manual weaponry is being deployed, are accomplished by human operators. Today's AWS can take

information from a human input (e.g., a radar signature) and use the information to select appropriate targets in the same way a manual weapon system operator would do. In future, AWS may be given the capacity to make decisions that have a level of complexity or ambiguity that currently require human input. There are instances where the selection of the target will be specifically covered by the legal obligations of combatants; for example, the obligation to take precautions contained in Article 57 of API. If humans are not undertaking such duties as target selection – or are sharing them with AWS – the question arises as to who holds legal responsibility for the actions of AWS. It would seem logical to assign responsibility to AWS; if they have taken over the role of a human combatant, can they not be regarded as at least a quasi-combatant, depending on how autonomous they are?

One cannot simply define AWS as having become a combatant on the basis of a plausible logical argument. There are disagreements as to what falls under the legal definition of a weapon; likewise, it is not clear whether the current formal definition of a combatant could encompass AWS. In terms of humans being defined as combatants, international humanitarian law is quite detailed regarding the status and behaviour that defines a combatant; whether or not machines such as AWS can fall into the same category is a novel concept.

The most obvious argument for classing AWS as combatants is that, if AWS assume responsibility for target selection, the control system of the weaponry is essentially no longer managed by a human combatant; why should we not also say that the legal responsibility for target selection has been transferred along with the physical responsibility? If AWS take over from a human combatant by choosing and attacking targets, there is a case to be made that they have become a *de facto* combatant and, subsequently, have all associated legal responsibility.

As it stands at present, IHL assumes that the term combatant can only legally apply to a human being. Combatants, in the legal sense, have both rights and obligations that are central to the whole concept of IHL, and that have developed to empower IHL to meet its objectives. It is absolutely central to the law that these rights and obligations are attached to those persons who take charge of violent acts during wars and other conflicts; there is a concomitant concept that such people may be subject to sanction if they transgress the law. This lies at the heart of the concept that those involved in armed conflict will only attack targets that are permitted by law, that non-combatants will not be attacked, and that all other areas of IHL will be respected. If AWS were to be legally defined as combatants, that assumes they have some type of control over whether or not they undertake acts of violence. The preceding analysis of AWS technology demonstrated that the concept that AWS are independent of human commands is illusory. Like every other weapon, AWS does not meet the legal criteria for a combatant, and so cannot legally be compared to one.

It is possible that, if it were to be seen as desirable, nonhuman entities could be given responsible status in IHL or other legislation. A clear analogy would be with corporation law, where a corporation can be said to have a legal personality. Nothing of this nature has been attempted previously, but it would not be impossible to place the legal responsibility for target selection or other tasks on AWS (Solum, 1992, p. 1231). This would be to enter into an extremely dubious area; humans would still be manufacturing and programming AWS and, therefore, be in control of them; if AWS were given legal responsibility, this would represent a means of absolving all those who were involved in their creation of any responsibility. Furthermore, it would be highly dubious to allow humans to manufacture machines with a certain purpose and then, when the machine carries out that purpose, to allow them to place the blame on the machine.

The chances of laws being abused in this way, and the fact that the law as it stands is predicated upon combatants being humans, and weapons having no human intervention, represent strong arguments against classifying AWS as combatant/weapon amalgams. It would be questionable as to how the law would define how much autonomy, or what other features, would give an AWS quasi-combatant status.

In summary, this article holds that there is one insuperable difficulty associated with classing AWS as combatants: combatants are human beings, with legal responsibilities. However similar they may become to human combatants in the future, either in their deployment or their ability, they will remain machines that are built and employed by humans. There is nothing in existing law, nor is there any reason for laws to be made, to give an object a similar legal personality to a human being. In law, AWS must remain in the category of a weapon. However, there remains ambiguities of what specific international weapons law rules related to the prohibition of weapons that have the ability to indiscriminately kill and/or cause unnecessary harm and the ways in which AWS complies with such laws.

Although it will require an important caveat, the notion of education and training could thus be applied to AWS via programming and machine learning technologies. In essence, these terms could be understood to indicate learning activities, those aimed at increasing awareness, and those designed to improve the attitudes, skills and knowledge associated with human rights.[7] Evidently, education and training suggest a human learning process that cannot be associated with AWS. AWS operations will, however, be bound by their programming. If this programming is such that these systems can apply a graduated use of force in the same way as a human agent, the precautionary duty would be sufficiently fulfilled (Chengeta, 2016, p. 50). This work holds that, albeit technically challenging, such a situation is not entirely impossible (Heyns, 2016). What remains to be discovered, however, is the extent to which this education and training meet the ECtHR standard of "respect for human life as a fundamental value" (Heyns, 2016, p. 366). As the valuation of human life is a complex task that cannot be fulfilled by algorithms (Surden, 2014, p. 92), the resulting consideration is decisive. Whilst a specific use of force might meet IHRL regulation regarding the use of legal force, the applier of this force has no human agency and cannot determine the value of its own action.

The concept of meaningful human control is a concept of control that has been put forward in the debate on autonomous weapon systems and is seen as a solution to potential problems and issues that may arise with these weapon systems. Of course, while there is a general acceptance of human control in autonomous weapon systems, there is no such acceptance in the definition, elaboration and implementation of such human control. In this respect, there are different key elements in terms of the content of meaningful human control (Hoven & Santoni de Sio, 2018).

In 2016, Article 36 introduced the concept of meaningful human control, stating that there are three absolute requirements for such control. These are

Information: The person in control and others responsible for planning the attack must have sufficient information about the environment of the target to be attacked, why the target is being attacked in particular, the objectives of the mission undertaken, and the short and long-term effects of the weapon.

Action: Initiating the attack must require the active action of the person responsible for control.

Accountability: Those responsible for assessing the information and initiating the attack must be held accountable for the outcome of the attack (Roff & Moyes, Meaningful Human Control, Artificial Intelligence and Autonomous Weapons, 2016).

Basically, the three key elements of human control are as follows: The availability of human oversight and the ability to intervene or stop use, ensuring predictability and reliability in systems to enable human intervention, clarity on what the weapon system is being used for, the nature of the target being attacked, operational limitations such as the time from activation of the weapon system to the initiation of an attack, and the identification of potential unintended consequences (Scharre & Horowitz, 2015).

Noel Sharkey categorized human control according to different levels of autonomy to overcome the drawbacks of a uniform formula for each type of weapon system, use and environment of use. According to Sharkey, the level of autonomy and human control is subject to 5 different classifications. According to this (Sharkey, 2016);

Level 1: The operator in charge of control decides to engage, identify targets and initiate the attack.

Level 2: The program suggests alternative targets or a list of targets, and the person in control chooses which ones to attack.

Level 3: The program selects the targets, but the attack requires the approval of the person in control.

Level 4: The program selects the targets. The person in control has a limited amount of time to cancel it.

Level 5: The program selects targets and launches the attack without human intervention.

This differentiated approach was also adopted by Amoroso and Tamburrini. Amoroso and Tamburrini proposed that levels 1 and 2 should be accepted as general use policy, while other levels should be acceptable only if exceptions are recognized within the framework of weapon systems and their uses. That is, if there is no international acceptance of a level other than levels 1 and 2 for specific weapon systems, levels 1 and 2

[7] See for instance *the UN Declaration on Human Rights Education and Training*, adopted by the UNGA on 19 December 2011, UN Doc. A/RES/66/137.

would apply to all types of weapon systems and their uses as general use policy. The other levels would apply to accepted weapon systems and uses (Tamburrini & Amoroso, 2020, p. 29).

Examples of use by level are also given. Examples of where level 3 can be used are in areas where there are no or very few civilians, such as on the high seas, in areas such as deserts or in previously demarcated environments, while level 4 is used exclusively for defence purposes. Level 5 is unacceptable, Chengeta stating that use at this level is incompatible with the requirements of meaningful human control (Chengeta, Defining the Emerging Notion of Meaningful Human Control in Weapon Systems, 2017, p. 317). However, the author of this article made a very limited exception to this and stated that this level of autonomy would be acceptable in cases where human control would be both impractical and dangerous to humans. An example of this is the increase of defence systems from level 4 to level 5 in order to protect people, especially in order to prevent attacks that develop very quickly and require a reaction in a very short period of time.

Rather than a uniform control arrangement for every weapon system and its possible uses, we believe that the formula of differentiated levels of human control and autonomy for different weapon systems and uses, as classified by Sharkey and adopted by some authors in the doctrine, would be more useful. This is because adopting a uniform formula would not only make it difficult to regulate internationally, but would also lead to the unnecessary prohibition or restriction of weapon systems that currently operate with a certain level of autonomy without raising any concerns. Differentiated use policies and levels, on the other hand, would facilitate an international arrangement that is more in line with today's reality, namely the fact that technology will continue to evolve and that these technological capabilities will be in demand in the military field.

However, there are points in Amoroso and Tamburrini's examples with which we disagree. Unlike the example given for level 4, it is worth noting that level 4 can be accepted not only for defence purposes, but also for offensive purposes with advanced sensors and cameras due to technological advances. In our opinion, it is clear that states will want to benefit from advancing technological capabilities not only for defensive purposes but also for offensive purposes by increasing the autonomy given to the weapon system. Again, we believe that level 5 can also be used for some specific offensive purposes, with very limited exceptions, as a use against attacks that require a very fast reaction, by evaluating all conditions.

For this reason, it would be appropriate to consider the concept of meaningful human control in conjunction with the realities of both technology and the international community. With technology advancing every day, it is not known exactly how autonomous weapon systems and their use will take shape in the coming years. In addition, it is a fact that states will want to use every technological opportunity and development in the military field. Therefore, a complete ban on autonomous weapon systems would neither be widely accepted in the international arena nor in line with technological realities. Rather than a ban, an international arrangement that includes clarifying rules on the balance of control and autonomy, as well as on the policy of use, seems to be more useful (Anderson & Waxman, 2013).

If the issues of meaningful human control and autonomous weapon systems are to be subject to international regulation, it should be neither too restrictive nor too inclusive. Too restrictive regulation would be inconsistent with the characteristics that make autonomous weapon systems autonomous, and with the accepted definitions and classifications of autonomous weapon systems. Regulations that are too permissive may lead to misuse and unintended consequences. Again, the importance of differentiated control policies should be reiterated in order to avoid a potential liability gap in the event that the use of autonomous weapon systems leads to consequences contrary to humanitarian law. In the face of all these situations, considering the advances in technology and the attitudes of states towards demand, in our opinion, a proper regulation can only be achieved through a balanced distribution of differentiated use policies.

While, initially, this may seem wildly incompatible with the positive duty of education and training, AWS supporters may disagree. This positive duty is intended to create a greater respect for basic human rights, which are often ignored in current law enforcement operations. If an AWS' application of force were restricted by its internal algorithms, pending specific conditions such as those in which a human agent would use lethal force, then the duty of education and training would be, in essence, respected. Further, the AWS would no longer be required to understand the value of human life. Otherwise explained, a machine does not require the same cognitive capability as a human to behave in an acceptable manner.

The positive duty of education and training could be understood as obligating states to develop law enforcement AWS that can at least perform in the same way as human agents. Essentially, this means that they need to provide analogous responses to analogous situations (Arkin, 2010, p. 332).

2.3. Procedural Obligation

The duty to investigate and prosecute, better known as the procedural obligation (Ergi v. Turkey, 1998, p. 82), sees individuals who unlawfully deprive others of life held to account. This is "not an obligation of result but of means only" (Pueblo Bello Massacre v Colombia, 2006, p. 143) and concerns the duty to investigate and prosecute when necessary. This duty seeks to ensure that responsible individuals are held to account, avoid impunity, encourage accountability, prevent the denial of justice, and identify lessons that can steer policy and practice revisions, avoiding repeat violations (Jasinskis v. Latvia, 2010, p. 72).

Owing to human rights bodies, there is already a significant case law on the duty to investigate and prosecute (Zimbabwe NGO Human Rights Forum v Zimbabwe, 2006, p. 153). Essentially, investigations must enable public scrutiny whilst being prompt, independent, accessible to the victim's family, thorough, and able to determine whether the use of force was legal (Leach et al., 2016, p. 32). In sum, such investigations must serve their purpose, establishing the facts and assigning responsibility (Opuz v Turkey, 2009, p. 131). It is not necessary for a criminal act to have taken place (Šilih v. Slovenia, 2009, p. 194)—unless life has been deliberately deprived—if civil redress is considered insufficient without other solutions (Suarez de Guerrero v. Colombia, 1982).

AWS have two main effects on the procedural obligation. Firstly, their deployment is likely to improve investigatory standards; it is rumored that such systems can be furnished with black box technology, recording data for subsequent analysis and allowing a human operator to track and audit the AWS' performance and decision-making process (Saxon, 2016). The kill switch represents a second viable option by which the notion of MHC can be fully taken into consideration in fully autonomous weapons systems. This represents an intense form of manual override that, when merged with a real-time feedback loop, makes it possible for a human operator to identify and terminate a weapons system that is no longer functioning as programmed (Egeland, 2016, p. 102). Devices of this nature are typically operated via a low-cost SIM card that is embedded into the system and communicates via the mobile network towers located in the area. These systems entail that the weapon can be remotely disabled in the event of a disproportionate attack, civilian targeting, or enemy hacking and theft (Thurnher, Examining Autonomous Weapon Systems from a Law of Armed Conflict Perspective, 2014, p. 213). Therefore, were an AWS to use lethal force against a human target, a human operator would be able to decide whether this was legal or not and, if not, to understand where the system failed e.g. if it had malfunctioned in some way. This addresses, in part, the matter of system legibility. This idea will be expanded in later sections. Were a human operator unable to determine why an AWS had acted in a specific way, given the circumstances, this would contravene the procedural obligation regarding the right to life. For an AWS to comply with this obligation, its performance would need to be legible.

Secondly, and somewhat in contrast, AWS could jeopardize the obligation to hold individuals to account if their use of force is found to have been unlawful. Currently, an AWS may behave in a manner that its operator is neither able to understand nor explain. Should states fail to establish mechanisms that permit "clear distribution of lines of responsibilities" (Tagayeva and Others v Russia, 2017, p. 570), this failure could promote a violation of the right to life, in terms of the procedural obligation.

In brief, the procedural obligation may not mandate the presence of human agents during the use of force, provided that humans are able to dissect how and why an AWS operated in a given manner and provided that responsibility can be attributed, should its use of force be proven to be illegal.

2.4. A Future of Non-Arbitrariness

To date, the case law provided by human rights bodies does not suggest that IHRL mandates human presence when the decision to use, or not use, lethal force is made. What is important, however, is to extend this analysis of the right to life, considering whether it contains any hidden ground for the prohibition of AWS.

Indeed, some commentators claim that "non-human decision-making regarding the use of lethal force is … inherently arbitrary, and all resulting deaths are arbitrary deprivations of life" (Asaro, 2012, p. 700). ICCPR and the ACHR make explicit the requirement for non-arbitrariness in deprivations of life. In the ECHR, conversely, this is only implicit. To determine whether autonomous decisions contravene the non-arbitrariness principle, one must define arbitrariness in the context of protecting the right to life. It is important to separate this idea from the negative and positive obligations. This is important for two reasons: firstly, as discussed,

these two sets of obligations tend to overlap one another; and secondly, this could offer a final, independent basis for the rejection of AWS, in respect of the right to life.

The notion of non-arbitrariness is typically linked with the legality requirement. Even in cases where lethal force is legal, this use must be non-arbitrary. Arguably, this notion refers equally to illegal deprivations and also unpredictable, inappropriate, and unjust deprivations.

The *travaux préparatoires* of Art. 6 ICCPR debated the definitions of arbitrary and arbitrarily. In fact, this debate had commenced years prior, when UDHR was first drafted (Boyle, 2015, p. 224). At this time, two conflicting definitions were presented; the first suggested that arbitrary meant "not in conformity with or provided for by law", while the second suggested that it meant unjust, notwithstanding adherence to domestic law (Hassan, 1969, p. 225). Discussed at the fifth, sixth and eighth sessions of the Commission on Human Rights, [8] the ICCPR's provision on the right to life eventually incorporated reference to arbitrariness. By including such reference, the ICCPR sought to resolve disagreements between its delegates on how the provision should be worded, especially regarding capital punishment (Nsereko, 1985, p. 248).

Subsequent case law shows that the use of the arbitrariness concept supplements that of legality. Not only is deprivation of life declared arbitrary when it violates law, but also when it contravenes the relevant human rights provision (Camargo Guerrero v. Colombia, 1982, p. 93). It would seem that arbitrariness was presented as a comprehensive concept that was intended to include without listing them a number of exceptional circumstances for the ban on deprivation of life. These include, for example, those listed in the Art. 2(2) ECHR provision. IACtHR case law refers to arbitrariness extending beyond a use of force that "does not conform to the formal law, but also that which is unjust". In this case, the meaning of unjust is that previously described in reference to the principles of necessity and proportionality (Barrios Family v. Venezuela, 2011, p. 49).

Further, GC36 acknowledges how the notion of arbitrariness has thus far developed. Essentially, it is seen to include inappropriateness, injustice, unpredictability, the due process of law, necessity, proportionality, and reasonableness.[9] In recent times, it has been declined regarding "discrimination" and even in terms of a "gender-sensitive approach" (Binz, 2017). This corresponds with academic opinion (Nsereko, 1985, p. 257) that understands arbitrariness to address matters such as military excesses (Hassan v. the United Kingdom, 2014, p. 110), enforced or involuntary disappearances, (Varnava and Others v. Turkey, 2009, p. 148) summary and extrajudicial killings, (Nadege Dorzema et al v Dominican Republic, 2012, p. 97) the discriminatory application of the death penalty,[10] and law enforcement abuses of power. (X v. the United Kingdom, 1981, p. 43) Often, this refers to the right to liberty as well as the right to life. Essentially, in accordance with General Comment No. 3 to the ACHPR, the concept of arbitrariness refers to "[a]ny deprivation of life resulting from a violation of the procedural or substantive safeguards' of the relevant human rights treaty."[11]

With the above considered, the argument that autonomous killing with no human decision-making would be *per se* arbitrary and incompatible with the right to life. According to Anderson and Waxman, an advanced tracking device could, theoretically, identify armed humans that are hidden in crowds or buildings. Operating autonomously, such robots could even launch an attack upon the combatant or upon a civilian who was directly engaged in hostilities. In order to overwrite incorrect classifications by the AWS, however, operators would need to act very quickly, using a real-time imagery feed from the scene (Anderson, Reisner, & Waxman, Adapting the Law of Armed Conflict to Autonomous Weapon Systems, 2014, p. 6). Potentially, the key focus of AWS in personnel tracking could be the carrying of arms. This would offer a clear differentiation between civilians and combatants. It is possible that the sensors in such systems could be programmed to identify weapons based on their heat signatures, sizes and shapes. As an example of such technology, the remotely controlled Modular Advanced Armed Robotic System (MAARS) can identify a weapon and read its nametag from a standoff position of between 300 and 400 metres (Singer, 2009, p. 30). Instead, existing law explains that an unreasonable deprivation of life is prohibited inasmuch as it is arbitrary. Arguably, if the applier of lethal force were a non-human agent, but a human agent could check and justify how and why the system had performed as it had, the resulting deprivation of life would not be considered

[8] See E/CN.4, SR.90, 91, 93, 94, 97, 98, 101, 135, 139, 140, 144, 149, 150, 152, 153, 199, 309, 310, 311.

[9] See HRC, *General Comment No. 36 (2018) on Article 6 of the International Covenant on Civil and Political Rights, on the Right to Life*, CCPR/C/GC/36, § 18.

[10] *General Comment No. 3 on the African Charter on Human and Peoples'Rights: The Right to Life (Article 4)*, availabe at http://www.achpr.org/instruments/general-comments-right-tolife/.

[11] See *General Comment No. 3*, § 12.

arbitrary. Relying upon a synergy between reasonableness and non-arbitrariness, the question of an AWS' interaction with the right to life could be considered as follows: if it is not possible to scrutinize the reasons behind an AWS' actions e.g. if, *Armani da Silva*, it shot an individual allegedly preparing to detonate a bomb in public, then the system will not provide the human agent for instance judge, citizen, public prosecutor, or operator with any explanation. This could be true, for instance, if the AWS were programmed with self-learning algorithms, as even data controllers could fail to understand its decision-making process. Scenarios such as this would undoubtedly affect the positive obligation to investigate any deprivation of life that is alleged to be unlawful. The non-arbitrariness requirement can thus be interpreted as needing each decision to use lethal force (the algorithmic decision-making process generating such an outcome) to be both understandable and explainable.

2.5. Another Option: The Right to Legibility and the Right Not be Subject to Entirely Automated Decisions

The requirement for algorithmic decision-making to be understandable and explainable has inspired a certain level of academic debate in the data protection arena. Some commentators argue that those subjected to automated decision-making must have a right to legibility within the corresponding process (McGregor, Ng, & Murray, 2019, p. 309). This section will therefore consider the scope of this right within data protection and the extent to which this right may assist the interpretation of ATC (algorithmic target construction) and how it affects the right to life.

Regarding data protection, several related and binding Council of Europe[12] and European Union provisions recognize an individual's right to understand how algorithms that affect them operate, as well as their impact. Specifically, the right to understand the reasons behind an automated decision is founded on a number of other rights, including the right to access information when a decision is already made and the right to access information, as provided by data controllers. Another important, related provision is the individual right not to be significantly affected by a decision that is based purely on the automated processing of one's data.[13] As well as in other international instruments, GDPR (General Data Protection Regulation) studies provide a systemic understanding of these two rights in that they create a right to legibility. Essentially, some hold that, in order to be comprehensible and transparent, the right not to be affected by automated decision-making must also mandate nominal human intervention and the right to access information must comprise a more general right to understand the precise reasons behind decisions affecting the subject (Malgieri & Comandé, 2017, p. 245). The key purpose of this right to legibility (Wachter, 2017, p. 92) is to better protect the rights of those impacted by automated decision-making in areas where vulnerabilities could be subject to greater exploitation e.g. misleading marketing or dishonest commercial activity.

Considered in terms of the right to life, the link between ATC and legibility is also important. Firstly, the legal requirements for legality and non-arbitrariness, as enshrined in IHRL, appear satisfied by an understanding of algorithms involved in the ATC process. Arguably, the protection of the right to life demands "an appropriate legal and administrative framework defining the limited circumstances in which law enforcement officials may use force and firearms, in the light of the relevant international standards" (Giuliani and Gaggio v. Italy, 2011, p. 209). If such a regulatory framework were unclear, or unable to provide individuals with legible indications of the circumstances causing a law-enforcement AWS to resort to lethal force the previously-discussed limited circumstances, the legality requirement would not be satisfied. Secondly, when seeking to fulfil the duty to investigate potentially unlawful deprivations of life, it is important to be able to explain the process behind a specific automated decision. As previously outlined, investigations must be able to determine whether not the level of force applied was justified, given the circumstances (Isayeva v. Russia, 2004, p. 221). Within the scope of ATC processing, it is thus crucial that public authorities provide comprehensible accounts of automated processes; if they fail to "explain how" (Khodorkovskiy and Lebedev v. Russia, 2013, p. 848), they may be held accountable under IHRL (Margulies, 2017, p. 23).

To strengthen this argument, one could propose that if an individual has the right not to suffer the consequences of an entirely automated decision, because ATC does not permit human intervention in split-

[12] See Modernized Convention No. 108, art. 9; *Explanatory Report to the Protocol amending the Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data*, CM(2018)2-addfinal (CETS No. 223), §§ 71-83.

[13] Directive 95/46/EC (General Data Protection Regulation), art. 22(1).

second decisions, the use of AWS would be prohibited. However, even this circumstance could be too unclear to prove that AWS are prohibited by IHRL. The right does have a number of exceptions; one of which applies when the decision is legally authorized and the individual's rights are appropriately safeguarded. Provided that AWS-use will be legally regulated managed by the rule of legality and will guarantee that the precise targeting conditions are considered, this exception will apply.

The notion of legibility, as proposed by academics, is useful in testing how AWS-use will impact the right to life. Should a public authority be unable to present and explain the reasons why AWS algorithms had generated a specific outcome. The authority would then become responsible for the actions concerned. The same would be true in situations where the circumstances permitting ATC were not legally regulated and the law did not appropriately safeguard basic human rights; this would ignore the right not to be the subject of entirely automated decisions. It does not seem, however, that IHRL provides such a right in a way that prevents AWS from targeting humans. For such a conclusion to be reached, it would first be necessary to re-address the understanding of the rights at stake. Indeed, this is not facilitated by current IHRL. It is at this point that human dignity comes into play.

3. AWS AND EXTRA-TERRITORIAL HUMAN RIGHTS OBLIGATIONS

The use of autonomous weapon systems serves to separate the system from the location at which the act of violence takes place. As such, they can act on an extraterritorial level. Armed drones have already been used to apply lethal force in overseas territories far away from the state agents who instigated the attack.

Per human rights treaties, state actors are obliged to ensure everyone within the jurisdiction is provided with the freedoms and rights outlined in the treaty. In this regard, the jurisdiction has a predominantly territorial application. As such, there is a lack of clarity as to the extent to which given treaties are applicable when a state perpetrates an act outside its physical territory or an act that has an effect elsewhere, regardless of whether that act is considered to be lawful or not. There has been a broad trend toward the notion that states are legally bound by their freedoms and rights obligations when their actions have implications for people outside their territories (Milanovic, 2012, p. 133).

In the renowned *Banković* judgment, the ECtHR failed to establish that an aerial bombardment was representative of effective control (Banković and others v Belgium and 16 Other Contracting States, 2001, p. 62). This finding was implicitly based on the notion that there were no troops on the ground. As such, in the case of the state parties, it wasn't possible to effectively assert control at an alternative point in time other than that at which the aerial bombardment occurred. Given the new jurisprudence, there has been a suggestion that "drone operations in Yemen or wherever would be just as excluded from the purview of human rights treaties as under *Bankovic*." (Milanovic, 2012, p. 130)

However, the application of AWS differs from the use of fighter planes. As such, there is an argument that the ECtHR and alternative human rights bodies will ultimately consider the aerial bombardment by AWS to represent an exercise of effective control.

First, AWS can technically cover larger areas than planes over a longer duration and at a significantly lower speed. While a plane can only survey an individual for a moment, an AWS can survey people over the course of days. This does not mean that duration represents an integral element of jurisdiction. The ECtHR may consider this fact of adding to the effectiveness of control, for public powers are not employed in the blink of an eye, but over the course of hours. Within that time period, the forces involved can launch an attack against the individual who is the subject of the surveillance. The AWS can kill someone at a moment's notice, autonomously or in response to the will of an operator who is located in another area of the world. In this regard, the use of the AWS could be considered to represent a jurisdiction in waiting (Milanovic, Extraterritorial Application of Human Rights Treaties: Law, Principles, and Policy, 2011, p. 170). The fact that the deployment of AWS is in some way weak, in that no one is at the scene, is not in contradiction to this finding. After all, even questionable control is enough if it is effective. Furthermore, the state that deploys the AWS has the power to attack an individual at any time. While there may be no troops on the ground, there are troops in the air that can take action at a moment's notice.

Second, having the ability to kill someone can be considered to represent the ultimate public power. The ECtHR declared that the notion of public powers, which was once reserved for the spatial model of jurisdiction, recognised the "exercise of extra-territorial jurisdiction by a Contracting State when, through the

consent, invitation or acquiescence of the Government of that territory, it exercises all or some of the public powers normally to be exercised by that Government." (Al-Skeini and others v The United Kingdom, 2011, p. 135) As such, as has been acutely observed, "the ability to kill is authority and control over the individual if the State has public powers, killing is not authority and control if the State is merely firing away missiles from an aircraft." (Milanovic, 2012, p. 130)

Third, the various assessments of aerial bombardment are subjective. From the perspective of the individual, differentiating between different views does not quite make sense. However, interpreting the jurisdiction-requirement through the lens of the object and purpose of human rights laws requires an in-depth reading. In the long run, the fundamental self-esteem of the individual and the equal and indisputable rights of human beings "is the foundation of freedom, justice and peace in the world."[14] As such, to establish the extent to which human rights are applicable, there is a need to consider the beneficiary of human rights laws as opposed to those who have the obligation. The primary objective of human rights is to ensure individuals are protected against the state as the entity with the most power. Subsequently, as soon as a state is placed in a position from which it can violate human rights, it is bound by human rights law (Clapham, 2006, p. 491).

Fourth, under the new jurisprudence of the ECtHR, (Al-Jedda v The United Kingdom, 2011) the human rights that are preserved in the ECHR can be adjusted to be aligned with a situation of mere aerial bombardment. After all, a state can exercise just some of the public powers. Subsequently, this action will be governed by some human rights, specifically those that fit the particular exercise.

Support for this perspective can be found in the ECtHR's jurisprudence (O'Boyle, 2004, p. 138). The Court ruled that Iranian nationals that were killed by Turkish helicopters while illegally crossing the Turkish-Iranian border were under Turkish jurisdiction, irrespective of whether they were on Iranian or Turkish soil at the time (Pad and others v Turkey, 2007, p. 53). In this regard, performing aerial bombing via AWS could represent the violation of the right to life (art. 2 ECHR) on the basis that the state has jurisdiction according to the spatial and/or personal approach; even though this jurisdiction is limited, it is not less effective.

However, it is clear that this perspective will not go unchallenged. Human rights instruments do not require jurisdiction without reason. Eventually, any act that a state commits outside the realms of its territory has the potential to violate a person's human rights and, as such, is tantamount to exercising authority or control over that individual. As such, there is a requirement for jurisdiction to limit the obligations of the state to some extent. If not, the term within their jurisdiction would not have any meaning or serve any real purpose.

In contrast, drone attacks are performed with some degree of control and surveillance that contends that there is some capacity for a degree of control to be exercised over individuals and territories, and this could fall within the realms of the extraterritorial application of the ECHR.

This position is upheld by arguments that call for the reconceptualization of human rights responsibilities in the digital era. When faced with the major privacy breaches that are committed using secret mass surveillance programs, some argue that merely surveying individuals in overseas territories is tantamount to virtual control that is enough to prompt the extraterritorial application of human rights treaties. *A fortiori*, surveying people in combination with the risk, perceived or otherwise, of being targeted by a machine that is operating according to parameters that the people who are within range of its sensors or weapons have no ability to influence or escape must serve to bring these individuals within the state's jurisdiction. The assertion of extraterritorial jurisdiction is also consistent with the larger view that states cannot be permitted to elude their responsibilities under human rights treaties by establishing a new weapon technology that diminishes human control over the application of particular types of force.

Therefore, it can be argued that the application of AWS represents effective control and jurisdiction if a state exercises jurisdiction in waiting. This results in an extraterritorial situation in which a state can exercise all or some of the public powers within a moment's notice. This exercise frequently involving human rights violation; while exercising public powers according to the will of the state and not any other influence or actions, particularly in the case of the target concerned; and the jurisdiction in waiting being applied over a not negligible length of time that differentiates the situation from a sheer fleetingly existence of public power or effective control.

[14] Preambular paragraphs 1 and 2 ICCPR.

4. CONCLUSION

Consequently, AWS used in law enforcement that are furnished with non-lethal or less-lethal weapons are all subject to the same regulation as those in existing scenarios. As AWS make real-time decisions with no human intervention, their application of force is inherently inhuman. Whilst a potentially appealing argument, this is somewhat far-fetched. Indeed, the notion of inhuman has always been considered in the context of something that relates to the treatment of an individual, and not to the specific nature of the applicator. Otherwise explained, this argument may play a *de jure condendo* role, stimulating further reflection on the matter. It cannot, however, be used to conclude that all AWS killings constitute inhuman treatment.

In conclusion, existing case law does not suggest that AWS will be unable to comply with the positive obligation attached to the right to life. Although the current standards of reasonableness and honest belief or honest perception have been developed for human appliers of force, there is no apparent reason why such standards could not be applied to AWS, provided these systems guarantee a comparable level of performance. It is, however, clear that such requirements are very challenging for non-human agents, demanding a deep situational-awareness that could take tens of years to develop for A.I. It is for this reason AWS performance can be unable to match that of human counterparts and that this will remain unchanged for some time. In legal terms, however, compliance with the rule of proportionality does not stipulate human consideration, nor does compliance with that of necessity or legality.

This study does not require ethics committee approval.

Notes about the article The article has been prepared in accordance with research and publication ethics.

The entire study was conducted by the only declared author.

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