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AUTONOMOUS DRONE WARFARE

Information technology, artificial intelligence, and robots are becoming increasingly important in our society. This is also evident in the military field. Many countries are equipping their armies with drones that can operate thousands of miles away in autonomous or semi-autonomous mode. „Whoever is the leader of artificial intelligence [AI], will be the leader of the world,” Vladimir Putin said as early as 2017 (cf. Columba Jerez, 2022)¹.

Recently, it has been known that, on March 27, 2020, a Turkish drone had autonomously taken the decision to attack enemy troops in the Libyan war. The drone decided the attack following its built-in algorithm, without waiting for any human intervention (Apps, 2021; Lambert, 2020, p. 95). This news highlighted the possibility of new war scenarios and fundamental changes in the nature of conflicts (Asaro, 2012; Galliot, 2017; Tomasi, 2014). Russia is also suspected of using such kind of robots in the current war against Ukraine (cf. Kallenborn, 2022; Pati, 2022).

The Catholic Church teaches that war „is always a defeat for humanity,” (Francis, 2013; 2020 [FT], n. 261; Paul VI, 1965) “the negation of all rights and a dramatic assault on the environment” (FT 257). Robotic warfare deepens this dehumanization and, therefore, cannot be promoted as a solution. To break the spiral of

¹ In the recent phase of the war against Ukraine, started on 24.02.2022, Russia is reportedly using, among others, Lantset kamikaze drones. Ukraine also uses various types of drones.

violence, we need to overcome the attitudes that have generated it and the injustices that feed it. Francis of Assisi is an inspiring model about this.

The first part of this article examines some of the military drones currently under development, indicating the challenges they present, especially from an ethical point of view. In the second part, it is noted that those who defend autonomous military drones often have a negative anthropological conception that contradicts the Christian vision of the human being. They also justify those drones by appealing to the Just War theory, which the Catholic Magisterium already considers impracticable. In the third part, Francis of Assisi is presented as a model of a pacified society that paves the way for peace and promotes fraternal relations, instead of considering war as inevitable.

1. WAR DRONES OR “KILLER ROBOTS”

When programming a military drone, it is possible to decide the type of control that the human agent will exercise over its piloting and learning, even to the point of making them highly autonomous (cf. Lambert, 2017, p. 18-20). Based on the type of control, we can distinguish between military attack robots, that can act in autonomous mode (LAWS: „Lethal Autonomous Weapon Systems” [Vilmer, 2017, p. 98]²), and other robotic military systems (RMS: „Robotized military systems”).

It is important to distinguish between an automated system and an autonomous system. Both perform actions without the timely and direct intervention of a human agent, but those of the former are predictable and have been programmed, while those of the autonomous system may be unpredictable and could eventually exceed the objectives and actions initially set by the human programmer (Jurkovic, 2017).

There are also computerized robotic systems that operate in computer networks with virus-like techniques and that could lead to serious and unpredictable cyber-wars. Such systems can spread false information to influence public opinion and the outcome of election campaigns, manipulate the financial system for criminal purposes, obtain sensitive information using deceptive methods, block the economic system of an entire country, etc. The allegations of Russian interference in the 2016 U.S. presidential election are just one example (cf. Jamieson 2020; Davis, 2021).

RMS are managed by remote control. The human operator is the only one who can make the ultimate decision to fire, as it is currently the case with intercontinental missiles. Their offensive and defensive use is generally accepted without

2 The „Lethal Autonomous Weapon Systems” (LAWS), are often called „killer robots.” In a science fiction scenario, one could think of absolutely autonomous LAWS, as designed and programmed by other machines..

major problems, provided that the decision is in accordance with the criteria of Just War theory and that such human control is sufficient, adequate, and meaningful; that is, the operator must have all the necessary information about the target, the context, and the possible effects of the attack before deciding (Vilmer, 2017, p. 104).

A second category of RMS, closer to LAWS, are the semi-autonomous weapon systems, capable of individuating targets on their own, but continuously monitored by the human agent, who can interrupt their actions at any time. It is now accepted that the ethically valid use of these semi-autonomous weapons should be restricted to defensive tasks, e.g., missile defense (Ibidem, p. 101).

The third category would be the LAWS, which are autonomous systems in their operation and learning. For this reason, they are also referred to as „innovative LAWS.” It is not easy to determine who will be directly responsible for their actions and their „collateral effects.” The autonomy with which they act, once activated, makes them suitable only for attacking material targets, such as systems that block communications. However, the line between human monitoring and the total absence of such control is becoming increasingly blurred. (Ibidem, p. 110).

International law is expected to regulate the use of LAWS, but little progress has been made so far. The Convention on Certain Conventional Weapons (CCW), held in Geneva on 21.12.2021 failed to reach an agreement³.

1.1. The difficult task of programming these drones

It is very difficult to program these war robots. It would be even more difficult to provide them with effective ethical rules, something that currently seems impossible (cf. Wallach, Allen 2010), because real circumstances are always complex and ethics cannot be reduced to logic nor to an automated application of rules. Moreover, the resulting algorithms presuppose a prior choice on the basic principles and on the type of ethics. Some suggest that utilitarian ethics would be the easiest to be implemented in an algorithm, since quantifiable effects could be assigned to each possible option (Bersini, 2018).

War situations are becoming increasingly complex. „Collateral damage” has increased exponentially in recent wars, resulting in numerous innocent casualties. Fighters fire from populated areas and often use civilians as human shields. They seek to make it difficult for the enemy to distinguish between combatants and ci-

3 The fear that innovative LAWS (sans „contrôle humain significatif”) arise has led to the fact that, in the United Nations Convention on Certain Conventional Weapons (CCW), “la plupart des opposants veulent les interdire préventivement”. Vilmer, 2016, p. 123. About LAWS in the CCW: <https://www.un.org/disarmament/the-convention-on-certain-conventional-weapons/background-on-laws-in-the-ccw/>

vilians. Besides, it is not easy to determine, especially for a robot, whether enemy soldiers have surrendered or are out of action, as well as to assess the proportionality of the response (Vilmer, 2017, p. 108). Furthermore, the risk that hackers could modify the LAWS and use them for large-scale terrorist attacks should not be underestimated.

1.2. The dangers of robotic warfare

Once the war begins, the contenders seek to eliminate the enemy or reduce him to impotence and, for this purpose, they do not hesitate to destroy human lives. The fact of being robotized does not make war more respectful of human dignity, since armed robots process everything coldly, as binary code, without mercy or forgiveness.

Some authors argue that the use of robots would significantly reduce the human cost of war (Kahn, 2020, p. 270), thus avoiding the protest movements that condition the action of the government (Lambert, 2020, p. 95; Tomasi, 2017, p. 75). Western countries are already orienting the development of their armaments in this direction. This could lead to an arms race even more difficult to control than the preceding cold war, that had been centered on atomic weapons. Armed conflicts could also increase, since the benefits that the aggressor countries expect to achieve would compensate for the reduced costs that they would have to pay for using armed force. With less expenses and less social contestation, the decision to go to war would be easier to make and responsibilities more difficult to determine.

On the other hand, the absence of casualties on the robotized side would provoke a desire for revenge on the other side, which could lead to more terrorism and more guerrilla warfare.

“With increased globalization, what might appear as an immediate or practical solution for one part of the world initiates a chain of violent and often latent effects that end up harming the entire planet and opening the way to new and worse wars in the future” (*FT* 259).

1.3. Throwing the stone and hiding the hand

We cannot abdicate our responsibilities, especially if the life or death of many people are at stake. Kant stated that

“a person is a subject whose actions can be *imputed* to him. *Moral* personality is therefore nothing other than the freedom of a rational being under moral laws. [...] A thing is that to which nothing can be imputed. Any

object of free choice which itself lacks freedom is therefore a thing (*res corporalis*)” (Kant, 2004, p. 30; Jurkovic, 2017).

The robot is a thing. Hans Jonas has also affirmed that “man is the only being known to us that can take responsibility.” (Salamander, 2008). Algorithms must help us be more sensitive, attentive, and responsible, not the other way around.

The arms industry, however, is developing techniques that make it possible to strike from very far away, without running the risk of being detected and shot down. There are intercontinental missiles, pilotless drones, planes, and ships that fire from enormous distances and altitudes. There are also anti-personnel mines that kill long after being placed. It is easy to eliminate thousands of people when previously they have been reduced to figurines on a computer screen. By avoiding any kind of face-to-face relationship, the “other” is not seen as an „*alter ego*” but as an anonymous being, alien to oneself, and for whom I do not feel responsible.

LAWS can be used to avoid victims of one’s own and evade any responsibility for those of others. The autonomy and learning capacity of these systems are a good excuse. Collateral damages can be attributed to a drone malfunction, to the transmission chain, or to other causes that are difficult to verify (Ricoeur, 1995, p. 64).

Some types of robots are already being associated with insurances that offer compensation for the damages they may cause, thus attributing to them a fictitious legal personality and blurring the responsibility of those who have created, programmed, and sold them (Lambert, 2017, p. 28). This strategy favors the abuse and impunity of the real culprits.

2. BASIS FOR OVERCOMING THE NEW ARMS RACE

The use of LAWS is justified on the grounds that they would behave in a more rational and balanced way than humans. Some people claim that such combat robots would reduce the number of innocent lives and commit fewer war crimes, as they would not be subject to human passions such as fear, revenge, or hatred (cf. Arkin, 2009).

Eventually, with further developments in artificial intelligence, such machines could come to detect emotions and respond in a „quasi-empathetic” mode. Those who make these claims usually forget that empathy is much more than an automated reaction. Only human beings are deeply moved by the pain of others and capable of feeling the suffering of others in their own bodies. Without corporeality, empathy is not possible (cf. Hoffman, 2002; Bacchini, 2013; Altuna, 2016).

2.1. Overcoming the negative anthropological conception

The arguments used to justify the LAWS are based on a negative anthropological conception (*homo homini lupus* [Hobbes, 2021]), according to which the human being would be unreliable and his actions would always respond to the instinct of self-preservation⁴. Christianity, on the contrary, affirms that we are naturally social (cf. Augustine, 1841-1846, vol. XLI, p. 376; Tomas Aquinas, 1967, 3.117, 4.54; 1994, q. 114, a. 1 ad 2).

We need to embrace a more positive anthropological conception. Indeed, the above arguments for preferring the LAWS to humans can also be used in the opposite sense. In the Christian perspective, human beings are intrinsically social, capable of forgiveness and compassion, because they are endowed with a deep moral sense and they are naturally inclined to avoid killing. Instead of delegating the questions of life and death to machines, we must assume them responsibly, always leaving open the possibility of forgiveness and self-giving. Lasting peace is built on reconciliation, dialogue, and forgiveness, not on violence and oblivion.

“Forgiving does not mean forgetting. [...] Those who truly forgive do not forget. Instead, they choose not to yield to the same destructive force that caused them so much suffering. They break the vicious circle [...]. This does not mean impunity [...]. Forgiveness is precisely what enables us to pursue justice without falling into a spiral of revenge or the injustice of forgetting” (*FT* 250-252).

Only human beings can build a community of values, fraternal and authentically human. They cannot delegate this task to machines. The cold calculation of LAWS, based on the principle of the maximum utility, could lead to atrocities. Moreover, the mere presence of enemy LAWS could be used to terrorize the civilian population and thus influence its leaders and fighters. The current International Humanitarian Law (IHL) rejects this strategy that steals social peace and generates permanent fear. “Arms, and especially the terrible arms that modern science has provided you, engender bad dreams, feed evil sentiments, create nightmares, hostilities [...]. They warp the outlook of nations.” (Paul VI, 1965, p. 880).

Moreover, the human being can bypass the logic of equivalence that governs justice to embrace gratuitousness and forgiveness, thus opening a future of hope and fraternity.

4 This would be the basic principle of Western civilization. Adorno, Horkheimer, 1997, 29.

“Forgiveness belongs to an economy of the gift that reverses the human logic of equivalence. [...] The ‘project’ of forgiveness is not to wipe memory. It is not forgetting. On the contrary, its project, which is to overlook the debt, is incompatible with that of overlooking what is forgotten. Pardon is a kind of healing of memory, the end of mourning. Delivered from the weight of debt, memory is freed for great projects. Pardon gives memory a future.” (Ricoeur, 1995b).

2.2. The Just War theory is no longer valid

The negative anthropological conception has led to considering war as inevitable and, therefore, to justify the arms race. The Just War theory responds to this conviction and affirms that, under certain conditions⁵, a defensive war is morally acceptable if it is declared and carried out to restore peace and justice.

This theory is also invoked to justify and regularize the use of LAWS. To the arguments used for nuclear deterrence, it is now added that these autonomous drones could protect us from large-scale and intense attacks.

It is usually said that the Just War tradition was initiated by St. Augustine and systematized by St. Thomas of Aquinas. Both authors, however, also condemn war as a horrendous evil (Augustine, 2009, XIX, c. 7; XIX c. 15; IV, 6). St. Thomas places it among the sins contrary to charity (Thomas Aquinas, 1994, q. 40). The School of Salamanca applies this theory to the wars of colonization, thus using a more rational criterion to justify war, instead of defending the fight against the infidels for the simple fact of not belonging to one’s own religion (cf. Vitoria, 1959).

From the 16th-17th centuries onwards, sovereign states used this doctrine as an excuse to justify their imperialism and their right to declare war, i.e., they passed this doctrine from the moral level to the juridical level. Some documents of the Catholic Magisterium have also appealed to this doctrine, but it has never been assumed in a formal declaration by the Church. Other religions have held similar positions (Himes, 2001).

“The Catechism of the Catholic Church speaks of the possibility of legitimate defense by means of military force, which involves demonstrating that certain ‘rigorous conditions of moral legitimacy’ [CCC 2309]. Yet it is easy to fall into an overly broad interpretation of this potential right” (FT 258).

5 1. Legittima auctoritas, 2. iusta causa, 3. recta intentio, 4. debitus modus, 5. ultima ratio. *Catechism of the Catholic Church*, [CCC], 1997, n. 2309; cf. O’Donovan, 2006; Winright, Johnston, 2015.

Among Catholics, the encyclical *Pacem in Terris* (John XXIII, 1963) marked the end of the official references to the Just War theory (cf. Lorenzetti, 2013). Since then, it is assumed that the destructive power of modern weapons prevents war from being a proportionate response to redress injustice. This is even more evident in robotic warfare, as the LAWS are incapable of applying the principle of proportionality, that requires to take into consideration many elements. Moreover, today war is not a lesser evil, but the greater evil.

“The development of nuclear, chemical and biological weapons, and the enormous and growing possibilities offered by new technologies, have granted war an uncontrollable destructive power [...]. In view of this, it is very difficult nowadays to invoke the rational criteria elaborated in earlier centuries to speak of the possibility of a «just war.»” (*FT* 258, cf. Francis, 2015).

Nowadays, there are alternative instruments to restore peace and justice without resorting to war. It can therefore be said that the conditions that could justify the application of this doctrine are no longer possible. A similar argument has been used to reject the death penalty. Pope Francis teaches that both (war and the death penalty) „are false answers that do not resolve the problems they are meant to solve and ultimately do no more than introduce new elements of destruction” (*FT* 255).

2.3. Fostering the culture of encounter

Today some countries try to justify a new arms race as a guarantee of peace. They forget that new weapons lead to new wars and increase the risk of starting them. Pope Francis has clearly asserted that the mere fact of possessing atomic weapons is already immoral (Francis, 2019b). This statement can also be applied to LAWS.

Rather than saying „if you want peace, prepare for war” („*si vis pacem para bellum*”), we should say: „If you want peace, prepare for peace,” favoring dialogue, non-violence „and the studied practice of brotherhood.” (Second Vatican Council, 1966 [*GS*]). Indeed, peace should not be reduced to the absence of war, the balance of forces, and the terror of weapons. To be authentic, „peace must be born of mutual trust between nations” (*GS* 82; *FT* 262). On the contrary, „war, is frequently fueled by a breakdown in relations, hegemonic ambitions, abuses of power, fear of others and a tendency to see diversity as an obstacle” (*FT* 256).

„Every war leaves our world worse than it was before” (*FT* 261). We cannot allow the screens of computerized systems and autonomous robots to alienate and antagonize us. The Church teaches that the cultivation of the four fundamental

human relationships makes fraternity and lasting peace possible. Addressing UN leaders, the Pope invited them „to work together in promoting a true, worldwide ethical mobilization which, beyond all differences of religious or political convictions, will spread and put into practice a shared ideal of fraternity and solidarity.” (Francis, 2014).

The absence of face-to-face contact favors impunity, irresponsibility, and the spiral of violence. At the same time, it prevents empathy, mercy, compassion, and the development of interpersonal relationships. The Pope insists that „physical gestures, facial expressions, moments of silence, body language and even the smells, the trembling of hands, the blushes and perspiration that speak to us and are a part of human communication” (*FT* 43).

It is worth recalling the importance that E. Lévinas attributes to the face-to-face encounter. Moral behavior, he says, emanates from the simple presence of the „face” that serenely challenges me, without pressuring me with threats, gifts, or compensations. The weakness of that naked face brings me out of indifference and provokes in me a positive, welcoming response. Its nakedness opens me to welcome that personal, mysterious, unassailable, and unique thou.

The face “resists possession, resists my powers. In its epiphany, in expression, the sensible, still graspable, turns into total resistance to the grasp [...]. The face speaks to me and thereby invites me to a relation incommensurate.” (Lévinas, 1968, p. 197-198; cf. Rocchetta, 1993, p. 817).

The naked face imposes itself and constitutes me as an ethical and responsible subject. It makes me discover, within myself, an „ontological hospitality” towards the mystery of that personal being, towards the whole human family (Mura, 1982, p. 43; Lévinas, 1968, p. 40), towards God, and towards the whole of creation.

3. FRANCIS OF ASSISI, A MODEL OF FORGIVENESS AND RECONCILIATION

Francis of Assisi can serve as an inspiration in facing the challenges of the new wars⁶. In fact, he is universally recognized as a model of peace. „He is loved not only by Christians, but by many other believers and by people who, though far-removed from religion, identify with his ideals of justice, reconciliation and peace.” (John Paul II, 2002; Francis, 2019b).

6 We have developed this theme in other works. For example: Carbajo Núñez, 2008.

He himself was a direct witness of wars and tensions. He witnessed the assault on the Rocca fortress (1198), seat of the representative of the Empire. He also participated as a soldier in the civil war between nobles and bourgeois of Assisi (1199-1200), falling prisoner. In the midst of that hostile environment, he never lost his friendly disposition, always open to mercy and empathy. Thus, in the year he spent in prison in Perugia, he was placed among the knights, „because of his noble manners.” (Armstrong, Hermann, Short, 1999, vol II, p. 61-110, n. 4).

After being released, his father bought him a very elegant suit of armor together with the best possible horse, and encouraged him to enlist in a new war so that he could become a knight. Shortly after setting out on the road to the new war, he took pity on a poor soldier and gave him all his military equipment. Afterwards, he perceived the voice of the Most High (Ibidem, n. 6), who granted him the grace “to begin doing penance.” (Ibidem, vol. I, p. 124-127, n. 1).

For him, „doing penance” is synonymous with „showing mercy.” (Ibidem, n. 2) His conversion is concretized in new relationships, based on gratuitousness and pardon. He embraces poverty, but not as an exercise of self-perfection or self-fulfillment, but in a relational sense, so that nothing can prevent him from being a universal brother (Ibidem, vol. II, p. 61-110, n. 35) 35).

His poverty is not a frustrating renunciation, but a path of freedom, because it enables him to establish authentic relationships. It is significant that, at the beginning of his journey of conversion, he decides to replace his belt with a simple cord (Ibidem, vol. I, p. 171-308, n. 22). Indeed, medieval clothing lacked pockets, so the money pouch, the sword, and other personal items were carried in a series of buckles attached to the belt. On the cord, however, such items could not be carried.

In situations of bitter hatred, such as the fifth crusade (Mylod, 2019; Tyerman, 2017), the story of the wolf of Gubbio (Armstrong, Hermann, Short, 1999, vol II, p.775-889, n. 21), or the conflict between the bishop and the mayor (Podestà) of Assisi (Ibidem, p. 697-794 n.101), Francis felt compassion for both sides. Thus, he overcomes the prejudices that block relationships. He does not limit himself to denouncing violence but unveils the causes that provoke it and proposes a reciprocal pact, between equals, to re-establish justice⁷.

Instead of excluding the aggressive wolf of Gubbio, he integrates it into the community. The people of Gubbio repent of their sins and promise to feed the wolf, while the wolf renounces to do them any harm. He also uses the way of beauty, composing the last stanza of his *Canticum of Creatures* to overcome the hatred be-

7 To the techniques of conflict resolution (Fisher, Ury, 1991, 15ss) Francis of Assisi adds the need for forgiveness and mercy. Carbajo Núñez, 2017, 188-189.

tween Bishop Guido and Podestà Opórtolo (Ibidem, p. 111-230, n. 84). He had understood the power of the aesthetic gaze and the way of beauty (*via pulchritudinis*) to resolve conflicts.

In the fifth crusade, he felt compassion towards both sides (Crusaders and Saracens) and asked to meet the Sultan Mélek-al-Kamel amicably (Ibidem, vol I, p. 578-589, n. 960; n. 30; vol II, p. 596-510, n. 11,3)⁸. He „did not wage a war of words aimed at imposing doctrines; he simply spread the love of God” (*FT* 4). For this reason, he asks his friars that, when going among Saracens and other infidels, they must not “engage in arguments or disputes.” (Armstrong, Hermann, Short, 1999, vol I, p. 63-86, n. 16,6).

At a time when the promotion and financing of the crusades was a priority issue for Christianity, it is striking that the Pope, accepting a request of Francis, granted a new plenary indulgence to St. Mary of the Portiuncula (1216), focused on reconciliation, and without requiring any material compensation (cf. Brufani, 2016; Camere, 2017; Sensi, 2002).

CONCLUSION

Technology must be at the service of the human person, facilitating a life more in keeping with our intrinsically social nature. It would be a sad paradox if, instead of liberating, robots were to enslave us, hinder fraternal relationships, attack privacy, and provoke new wars.

When autonomous machines manage important aspects of social life, there is a risk of dehumanizing relationships and weakening universal fraternity. Therefore, the development of LAWS that are completely autonomous in their actions and learning should be prohibited. Every war is inhumane, but it will be even more so if those who execute it are autonomous machines and nobody takes direct responsibility for their actions.

Any weapons system with lethal capacity must remain under absolute human supervision. The responsibility for lethal actions performed by LAWS cannot be diluted by using the subterfuge of involving a myriad of possible agents: programmers, technicians, malfunctioning of some parts.

The Church rejoices in technological advances and recognizes them as fruits of the creativity with which God has endowed us (John Paul II, 1981; *LS* 102). Pope Francis lists, among them, the „information technology and, more recently,

⁸ The meeting took place at the end of the first siege of Damietta (August 1219), in the month of truce that preceded the resumption of hostilities. Ferrero, 2019.

the digital revolution, robotics, biotechnologies and nanotechnologies” (LS 102). As a master of humanity, the Church also warns against the misuse of certain advances that can only be considered positive if they „leave in its wake a better world and an integrally higher quality of life” (LS 194).

Violence provokes more violence. Only gratuitousness and forgiveness can lead to an authentic universal fraternity. Francis of Assisi shows us the way.

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AUTONOMOUS DRONE WARFARE

SUMMARY

Recently, a military robot has autonomously taken the decision to attack enemy troops in the Libyan war without waiting for any human intervention. Russia is also suspected of using such kind of robots in the current war against Ukraine. This news has highlighted the possibility of radical changes in war scenarios. Using a Catholic perspective, we will analyze these new challenges, indicating the anthropological and ethical bases that must lead to the prohibition of autonomous “killer robots” and, more generally, to the overcoming of the just war theory. We will also point out the importance of Francis of Assisi, whom the encyclical *Fratelli tutti* has proposed again as a model for advancing towards a fraternal and pacified humanity.

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