

## *EDITORIAL*

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**A** stark reality of history, and of weapons in particular, is that the fascination for rapid developments in science and technology has often outpaced thoughtful developments in human responsibility, values, conscience and international humanitarian law that such progresses ought to consider.

The case of Lethal Autonomous Weapons Systems (LAWS) is no exception. It has been argued that this could very well be a “Revolution in Military Affairs” (RMA), with respective risks to fundamentally change the nature of conflicts.

For these reasons and in order to understand the range and gravity of fundamental ethical issues and implications involved, it is of the utmost importance to enhance the discussion on autonomy in its various applications and in all segments of our society. One of the objectives of this publication is to provoke a debate to develop an informed position to establish a common understanding of the subject matter.

In current literature, one encounters a large number of classifications, based on different degrees of autonomy delegated to the machines. This is a clear symptom that the concept of autonomy is far from being unequivocal, since there is a spectrum of possible interactions between the machine and a human agent. To this purpose, in the first part of this working paper, a detailed definition of LAWS is put forward, thus making it possible to move forward by further restricting and clarifying what the usual terminology describes as “appropriate” or “meaningful” human supervision.

It is very important, therefore, to specify precisely the type of machine that is being considered. In the case of LAWS, the ethical and legal problems differ to a great extent, depending on whether the machines

are controlled, supervised, autonomous or innovative. In particular, innovative LAWS raise a variety of perplexing legal and ethical issues. How can we tolerate machines that reach beyond the objectives set by a responsible human agent?

The overarching underlying question is the following: can there be truly a respectful way to use - under certain conditions and at certain times - autonomous innovative machines?

A machine is a complex set of circuits, and this material system can never become a truly morally responsible agent. Only the human person is truly responsible for his/her actions, insofar as he/she is the source and principles of those acts and is the only who can truly answer for it.

Robots and artificial intelligence systems are based on rules, including protocols for the invention of new rules. But legal and ethical decisions often require going beyond the rule in order to save the spirit of the rule itself.

Any armed intervention must be duly considered, and its legitimacy, legality and conformity must be at all times verified with its purposes. The use of autonomous armed robots has the dangerous peculiarity of being able to eliminate an action of its content, its purposes, and its roots and easily conceal or dilute the responsibilities associated with it. Ultimately, the use of LAWS is no longer a human action but, perversely, it tries to exonerate the truly responsible agent.

Our overarching ethical criticism rests fundamentally on a de-humanization and de-responsibilization of the action by the human person since it causes a loss of content in the human action and the refusal of the responsibilities associated with it.

The idea of a “moral” and “human” war waged by non-conscious, non-responsible and non-human agents is a lure that conceals desperation and a dangerous lack of confidence in the human person. Yet, this ignores the fact that for a machine, a human person, just like everything else, is only a set of numbers, is only one being among others, interchangeable, and an object of application of certain rules or protocols. Now this is precisely the “inhuman”: the delegation of powers to autonomous machines puts us on the path of negation, oblivion or contempt for the essential characteristics unique to the human persons.

Some argue that robots could wage wars instead of humans so that the lives of soldiers would be spared. Paradoxically, however, even if one were to place oneself in the utopian configuration where two nations had robotic means, a simple symmetrical war between robots could not exist. History shows that war is the search for asymmetry and the weak point (the traditional “moral” objective in war) of a nation is always human life, in particular civilians. As is the case nowadays with terrorism, belligerents would certainly attempt to undermine human life and not simply destroy machines. Furthermore, with robots becoming increasingly less expensive, their loss will only have a minor impact. Let us imagine how much easier it would be to justify, to the national public opinion and media, the loss of a robot, instead of the loss of a soldier.

Moreover, there is another intrinsic and real risk, related to the emergence of a new potential arms race, faster and much less controllable than in the case of nuclear weapons. Compared to the rapid development of computer technology or artificial intelligence, the race for progress in the field of robotic weapons will be a source of increasing instability, urging nations that are victims of the “security dilemma” to increasingly invest more in sophisticated weapons rather than allocating resources to other sectors such as health and education. The case of atomic weapons should serve as a warning and offers a precedent for reflection here. The risks posed by LAWS, if no preventive actions are taken at the international level, would be that their immediate military interest and destabilizing effects could stimulate their development. The most advanced and developed nations would be once again favored in a new arms race, further increasing the gap between poor and rich nations.

Another worrying concern being outlined in the first part of this working paper is that it would be extremely dangerous to consider an “electronic personality” for the robot (civilian or military) or to give it a legal status as a human person. The confusion between the concepts of things (objects) and persons (subjects) risks jeopardizing the very foundation of law – that is the human person.

If we wish to remain faithful to an ethics based on the respect for the characteristics that are essential to the human person, we must certainly consider the prohibition of research and development of innovative armed robots, i.e., LAWS, the autonomy of which is maximum, without human supervision with respect to the programming, the piloting, and the learning (a situation where the human agent is entirely “out of the loop”). Such machines present an intrinsic risk that, at some

point, they may deviate from the areas of evolution or the objectives prescribed by the political or military responsible authority. Such loss or dilution of responsibility is unacceptable, for it nullifies the decision of its inherent human nature.

The human person, whether a political or military decision-maker, can in no case put himself/herself in a situation where he/she would be obliged to accept the results of actions carried out by machines, actions which he/she would not have consented to in conscience. Certainly, in this regard, the chain of command in military operations also would be significantly affected by using a stand-alone weapons systems. One could also query who, in the chain of command, will be able to oppose “decisions” taken by the machine? Will the autonomous combat machine occupy a certain place in the military hierarchy? And, in this case, will some lower-ranking military personnel necessarily and obligatorily be subject to the directives given by a robot?

To limit the “inhumanity” of war, to the extent possible, it is important to preserve, at the heart of the tragedies of armed conflicts, a certain space where people can still be sensitive to the misery of the other and regard him/her as a brother/sister and where one can risk gestures of forgiveness and reconciliation. This may seem paradoxical, but it is absolutely essential. There is a glimmer of humanity in the heart of conflicts, and this surpasses the criteria of utility and success.

A reflection on military robotics today cannot ignore the issue of “augmented” soldiers, which raises several ethical questions when looking critically at the transhumanism movement. Nowadays already, with the intense use of robotics by soldiers, we could likewise foresee a vast movement of robotization of the soldiers themselves, mainly by the augmentation of the soldier, which cannot proceed - just as in the case of innovative LAWS – without posing deep ethical and legal questions.

While ways of intrusively augmenting the performance of soldiers have existed for a long time, it is the elimination of an absolute reference to human nature that once again is problematic. The content of the second part of this working paper, therefore, rings another alarm bell: we must remain vigilant to focus on the issue of the augmented soldier, a combatant who has received the means or treatment that aim at increasing his/her performance.

For instance, such enhancement could relate to endurance or physical strength as well as speed of movement, to physiological resilience or the

modification of the body, or it could be envisaged from the perceptual point of view or it could apply to cognitive ability, decision-making, positioning and communication.

The presence of nanorobots capable of controlling or intervening in physiological parameters inside the bodies of soldiers could also exemplify this type of augmentation. In certain augmentation projects, the human person is transformed into an object. The robotized or augmented human person progressively becomes an instrument, a tool for combat. Eventually, the difference between soldiers and their equipment is erased and they become equipment themselves. This creates a major ethical problem. Effectively, the soldiers lose their freedom of decision.

We need to keep in mind that the body is not simply an object; it is the source of expression of a person, and thus the reflection of who we are. Therefore, combatant augmentation must be regulated by the requirement to preserve the autonomy of judgment and action. We need to be careful that augmentation does not transform soldiers into unconscientious “cyber puppets”.

It could be argued that augmentation that would control human parameters and quickly heal soldiers could be beneficial. Nevertheless, we cannot rule out that these systems very quickly could turn against the soldiers’ health, if such devices are susceptible to being controlled from the outside by an irresponsible authority.

It ought to be strongly emphasized that not all “augmentations” are opposed, just like the case of LAWS on which a human agent retains supervision, but only those that objectify or enslave the human person. For instance, one might think that exoskeletons that allow disabled people to move, devices that help to carry heavy loads, or all types of prostheses that contribute to simplify our existence and increase our quality of life, are to be welcomed and further developed.

The suggested ethical framework regarding the issue of augmented soldiers, therefore, begins with the respect for the integrity of the human body. Any augmentation of combatants should be done in a way that is reversible and respects the human body. Objectifying and artificially enhancing the body in a way that could be dangerous is *contra naturam*.

Hence, another way to envisage augmentation of soldiers is proposed: a moral augmentation. The authentically augmented individual should

be a human person endowed with a greater awareness of his/her responsibilities. Regrettably, it is not certain that the ethical education of combatants is keeping pace with their technological augmentation. Since the progressive elimination of the human body and dignity is associated with the transhumanist and “augmentative” mentality, this probably will lead us to the loss of shared core values, on which we would have expected to base relevant international laws and at least a minimum amount of shared morality. Such concealment of the human body and disruption of human interactions could easily lead to a decline of the *conscience publique* and of moral standards.

When we face the challenges brought about by the robotization of warfare, while a legal framework is certainly needed, this will not be enough: we will also need an appropriate ethical reflection profoundly engrained in what constitutes the richness and *grandeur* of the human person.

This profound attention to the human person, this respect for his/her own limitations, considered as assets, could lead to the establishment of a framework underpinning future discussions concerning the evaluation of these new military technologies, without disregarding those advances in science and technology that could guarantee health, well-being and peace.

Some questions that have emerged from this reflection are suggested as reference points for future discussions. These questions could constitute a template for an “ethical check list” that allows us to highlight and carefully consider a series of crucial dangers that should not be ignored.

While it is clear that there could be many answers to such questions, it may be important to consider how a common ground, based on the respect of human dignity, could be sought in the ongoing discussions. There is not the slightest doubt that the way forward is indeed the path of intellectual debate at all levels: among diplomats, politicians, scientists, philosophers, lawyers, military, businesses etc... The issues raised by innovative LAWS and augmented soldiers exceed by far the scope of the conduct of war but have implications and consequences on the entire human family. Therefore, it is necessary to act and use technologies in a suitable way so that these actions remain at all times compatible with the human person, with his/her body and spirit, with his/her strengths but also his/her limitations.

In conclusion, international security and peace are best achieved through the promotion of a culture of dialogue and cooperation, not through an arms race. Thus, an “ethics of fraternity” should be built on human relationships, on exchanges where compassion, understanding and respect for values must take precedence over profit. A world in which autonomous machines are left to manage, rigidly or randomly, fundamental questions related to the lives of human beings and nations, leads us imperceptibly to dehumanization and to a weakening of the ties that underlie the possibility of a true and lasting fraternity.