BOOK REVIEW

Jean-François Caron (2020). Contemporary Technologies and the Morality of Warfare. The War of the Machines. London: Routledge

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This recent book on morality of warfare is written by Jean-François Caron, Professor and Chair of the Department of Political Science and International Relations at Nazarbayev University, Kazakhstan, and fellow at the Institute of Political Science and Administration at the University of Opole, Poland. The author aims to show that the ethics of weapons systems such as autonomous and semi-autonomous robots, AI, cyber technologies and human enhancement technologies depends on which states use them. J. F. Caron argues that these should be "reasonable states" or the states that adhere to the rules of modern warfare (international treaties and conventions). In this case, their use of modern lethal and non-lethal weapons against opposing military forces is morally and legally justified.

Since 1977, when Michael Walzer published his seminal work *Just and Unjust Wars: A Moral Argument with Historical Illustrations*, the problematique of normalization and humanization of warfare has gained increased scholarly attention. *The Journal of Military Ethics* published in the 2000s provided a platform for just war theorists to develop the principles that would limit the scope of permissible violence and make armed conflicts less bloody. In Russia, the growing number of publications in journals *Logos*, *Voprosy filosofii* and *Sotsiologicheskoye obozrenie* also point to increased interest in this topic. Caron's book logically continues the debate about modern military practices by putting the main emphasis on technology, which is a rather underexplored aspect of the problem.

The book consists of six chapters. The first chapter starts with an overview of the most advanced methods and means of warfare, describing the distinctive features of different types of weapons, some of which, according to the author, can justify the use of these weapons. In the following chapters the author explains why the use of modern technologies is not only morally justified but is essential for a just war. The second chapter deals with the duty of care that the military institution has towards its members, in other words, the military commanders' obligation to treat soldiers with care, ensure their safety during the period of service and curb any negligence towards them. The third chapter focuses on the ability of modern military technologies to discriminate between combatants and non-combatants (civilians) during military operations. The following three chapters cover the critique and arguments brought up by scholars and wider public against the use of modern military technologies. In the fourth chapter, the author argues against the opinion that even the most advanced technologies not only are incapable of reducing but, on the contrary, increase the number of breaches of just war morality. Caron insists that to prevent war crimes from going unpunished, it is important to set strict rules for the use and development of military technologies. The fifth chapter discusses whether or to what extent moral it is to use the cutting-edge military technologies against the enemy's soldiers due to the asymmetry that arises between those who possess such technologies and those who do not. Finally, the last, sixth chapter describes the ethical and political fears concerning the use of modern military technologies from the perspective of the just war theory. The author argues that advanced technologies can serve as means of preventing wars rather than escalating unlawful violence.

In his book, not only does Caron provide an overview of the key works discussing the potential of the emerging military technologies and their implications but he also provides an in-depth analysis of the military reports about the operations that marked different stages in the evolution of such technologies in the second half of the 20th and early 21st century. Nevertheless, in our view, in some parts of his analysis the author is prone to giving rather subjective interpretations. However, we cannot but agree with the author's opinion that precision strikes against the attacker, which came to replace the "war until final victory" principle, appear to be a morally justified measure.

In our view, the author leaves room for uncertainty when he fails to provide clear distinctions between what is "just", "acceptable" or "legal" in the use of military technologies. As a result, the use of advanced weapons by a more developed country can easily turn the latter from a sovereign state seeking to protect its citizens into an aggressor persecuting undesirable communities and individuals. In this case the technological aspect that the author highlights is shifted to the political domain and requires a more conceptually elaborate reflection.

Modern Military Technologies

One of the book's obvious strengths is the detailed description of modern military technologies and their conceptualization. The author provides a careful examination of the new military weapons and their characteristics. Another important strength

of the book is that the author manages to stay immune to widely spread fears and misconceptions concerning the use of aerial vehicles (UAVs) based on artificial intelligence applications. It is shown how even the most technologically developed countries such as the USA, UK and China still have a long way to go on the creation of fully autonomous UAVs or other similar devices before they are able to exclude humans from the decision-making chain. Thus, the problem of the legitimate use of violence remains within the human sphere, which means that legally it is the drone operator, hired hacker or developer of an automated air defense system that can be charged with criminal negligence and misuse of military power. In his book, Caron provides a clear-cut classification of the types of technical autonomy in modern military systems (p. 8):

Types of autonomy	Technical specificities
Automated systems	
Weapons without autonomy	Weapons that have no autonomy and whose capacity to act depends on direct human control. Examples: machine guns and remotely controlled robots that inspect, detect, or disarm explosives or bombs
Non-lethal pre-programmed autonomy	Weapons whose autonomy can be pre-programmed and whose lethal capacities are an exclusive human responsibility. Example: drones
Lethal or destructive pre-programmed autonomy	Weapons targeting specific programmed objects with lethal force. Examples: the Israeli Iron Dome and the South Korean SGR-AI system.
Autonomous systems	
Lethal autonomy without human intervention	Hypothetical weapons able to show moral judgement when using lethal force against targets akin to human moral agency

Automatic Decision-Making Systems

The majority of prominent thinkers on the ethics of modern war (Michael Walzer, Paul Christopher, Nicholas Fotion, and Brian Orend) pay considerable attention to the notion of collateral damage, which is seen as the main counterargument against the use of lethal autonomous weapons. Inhuman killer robots stand out vividly in the public's mind, which means that any failures or errors in the work of automated systems are perceived as a sufficient reason to completely ban their use.

To counter this view, the author brings up a tragic incident that happened in 1988, when the USS Vincennes, a US Navy cruiser, shot down an Iranian civilian plane, killing all 290 passengers and crew members on board. This tragedy resulted from a

series of human errors on the part of the US military commandment and pilots of the civilian plane. Importantly,

> the USS Vincennes was at the time one of the first vessels of the US Navy that was equipped with the AEGIS combat system, a missile system that combined computer and radar technology to guide and destroy targets in record time and that could engage a multitude of targets simultaneously, the caveat being that the firing options could only be activated by a human being (pp. 46–47).

The limited time, stress and hostile environment led the crew of the American cruiser to see the civilian plane as a threat although the ship's automated combat system provided evidence of the opposite.

This and other examples discussed in the book show that more objective and emotionless decision-making may provide a moral counterbalance in the discussion about collateral damage in drone warfare. Following the Western intellectual tradition, Caron filled his book with practical cases and examples, which allowed him to avoid ungrounded theoretical speculations.

Principles of Legality of the Use of Modern Military Technologies

The UN's principle of "the responsibility to protect" (or R2P principle) is included in the international law regulating sovereign states' rights and duties in relation to their citizens. The aim to prevent massive atrocities and crimes such as genocide and ethnic cleansing is at the core of this principle. As the author makes clear, this principle can be applied not only to the above-mentioned crimes but also to terrorist attacks committed by radical Islamist organizations. In Caron's view, it is this principle that allowed to launch the international anti-terrorist struggle and gave Western countries more opportunities for interference in the internal affairs of states that, according to their intelligence services, were helping terrorists. This reasoning brings us to the key question as to how to identify the actual need to engage in warfare with and without modern military technologies, especially if these military operations are to be conducted on the territory of another state and do not have a clearly defensive character. For the sake of conceptual clarity, Caron proposes the following key principles. First, a state's use of advanced military weapons against combatants (and non-combatants as "collateral damage") of the opposing side can be considered legitimate if this state acts "reasonably" by adhering to all the international conventions. Second, the state's use of such weapons is considered legitimate if, in doing so, the state seeks to minimize the destructive effect of such weapons and to enhance their precision targeting.

The author considers these principles universal in the sense that they apply to all modern types of weapons,

> since chapter 7 of the UN Charter does not refer to any specific weapons in its definition of acts of aggression, and because international law does not refer

to any particular level of intensity in its definition of an attack, the lawful use of force ought to apply independently of the arms or weapons used against another country's sovereignty, a principle that is thought to also apply to a country's cyberspace (pp. 108-109).

Being "reasonable" is understood by the author as the ability to follow UN treaties, that is, a "reasonable" state will engage in a just, defensive war only if it has found itself under attack and there is a real threat to its civilians or military staff. The author does not deny that when conducting military operations involving high-tech weapons, a state may be pursuing its own hidden political or economic agenda. An air strike, deployment of special forces and maintaining full-time surveillance over leaders of terrorist organizations are univocally recognized as legal and ethical if they are likely to bring a decline in violence in the future. Caron underlines that the moral side of preventive military action taken by developed countries against terrorist and similar organizations is a debatable issue since such military operations resemble police sweeps much more than ideological struggle between different cultures and worldviews.