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The Ethical Imperative of Advancing Autonomous Weapon Systems

As we advance from the Stone Age to modern society, our tools have evolved dramatically—from communicating via pigeons to telecommunication, and from manual calculations to the use of computers. These advancements have liberated us, yet technology remains a double-edged sword, serving both civilian and military purposes. Currently, in the Russo-Ukrainian war, both sides have deployed numerous lethal autonomous weapons (LAWs), such as drones, which have transformed battlefield dynamics, exposing armor forces and infantry to new threats and significantly increasing casualties. This evolution raises a critical ethical question: Is it ethical to research and improve the lethality of autonomous weapons? I posit that it is indeed ethical, primarily because these technologies can reduce overall casualties and target adversaries with unprecedented precision.

Historically, significant technological advancements have redefined warfare. Eric Schmidt, a notable tech figure, once highlighted the significant impact of such innovations, drawing parallels to the introduction of nuclear weapons which fundamentally altered global military strategies ("Every once in a while, a new weapon, a new technology comes along that changes things..." - Schmidt). Similar to past innovations, such as the Maxim machine gun which hastened the conclusion of numerous battles in World War I, today's autonomous technologies are pivotal. They are not merely tools of destruction but also instruments of political strategy, potentially shortening conflicts and reducing broader societal impacts.

Recently, Israel's military utilized an autonomous defense system to intercept missiles from Iran, illustrating the defensive capabilities of such technology. CNN reported that almost all missiles and drones were successfully neutralized ("Almost all the ballistic missiles and drones Iran launched at Israel in an unprecedented attack late Saturday were intercepted and failed to meet their mark" - CNN). This incident underscores the potential of autonomous systems to significantly reduce casualties during sudden military escalations.

Furthermore, autonomous weapons systems are recognized for their capability to remove human soldiers from direct combat, thereby lessening the likelihood of casualties ("autonomous weapons systems can reduce casualties by removing human warfighters from dangerous missions" - Army University). These systems extend the battlefield reach while safeguarding human lives, a principle that aligns with ethical military conduct.

Conversely, the offensive use of drones by Russia in Ukraine exemplifies the precision capabilities of autonomous technologies, aimed strategically at disrupting infrastructure. These drones have been employed to specifically target power supplies, directly impacting military operations without causing extensive collateral damage. The BBC notes that "Russia has used the drones to target population centers and power stations, to deprive Ukraine of electricity and heating." From the perspective of subjective consequentialism, the purpose behind deploying these drones is to degrade Ukrainian infrastructure crucial for military resistance, and this objective has been effectively achieved. "The drones have both light-sensitive cameras, which can see in the dark with minimal lighting, and the more dangerous thermal cameras, per the outlet. These types of drones pose problems for Ukrainian forces, as they often move personnel and equipment in the dark to avoid attacks." (BusinessInsider). This satisfaction of subjective

consequentialism suggests that, ethically, the actions align with the intended and achieved outcomes—highlighting the use of autonomous technology to achieve specific military goals with reduced broader harm.

Critics argue that the development of AWS may spur an arms race or violate ethical standards, particularly the discrimination principle, which mandates the distinction between combatants and non-combatants. However, it is essential to recognize that no weapon system, autonomous or otherwise, can perfectly prevent the misuse or disguise of combatants as civilians. "Autonomous Weapon Systems (AWS) fail the so-called discrimination principle, yet, the wider public is largely unaware of this problem." The ethical dilemma lies not within the technology but in the tactics of warfare employed by adversaries. Moreover, historical precedents such as the London Naval Treaties before WWII, which set limitations on battleship specifications, show that international agreements can effectively regulate the development and deployment of powerful military technologies. Therefore, rather than condemning autonomous systems outright, we should advocate for robust international legal frameworks that govern their use, ensuring they are employed in ways that uphold ethical standards and reduce the likelihood of civilian casualties.

In conclusion, the advancement of autonomous weapon systems presents both challenges and opportunities. By enhancing precision and reducing the need for human soldiers to engage directly in combat, these systems can potentially minimize warfare casualties and accelerate conflict resolution. Ethical debates are crucial, but they must be paired with actions that address the realities of modern warfare. Promoting informed public discourse, advocating for international regulations, and investing in technologies that safeguard ethical principles are imperative steps toward harnessing the full potential of autonomous weapons in a manner that

aligns with both strategic interests and moral imperatives. As we continue to navigate the complexities of AWS, the focus should be on creating a framework that maximizes their benefits while mitigating their risks, ensuring that technology serves as a force for good in the geopolitical landscape.

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