Choices Regarding the Implementation of Autonomous Robot Soldiers

When implementing autonomous robot soldiers into the real world, there are choices to be made regarding their development and deployment. These choices are significant as they determine the characteristics of this technology when or if it becomes a part of daily life. These choices can be structurally broken down into three main points; strategic, legal, and ethical choices. By doing so, we can gain a better understanding of the intricacies involved when a technology such as autonomous robot soldiers is introduced into our world.

The obvious choices that are made regarding the implementation of autonomous robot soldiers would be concerning the technology's capabilities in military scenarios. After thoroughly exploring the technology's opportunities, we know that robot soldiers would yield benefits such as enhanced precision and efficiency compared to human soldiers, as well as reducing human casualties on the frontlines. However, to achieve these benefits, choices made in the development path of these robot soldiers must be made with careful consideration. Choices such as the level of autonomy that should be given to these robot soldiers for the technology to reach its full potential. Poorly made choices would lead to more risks when implementing this technology.

We must also take into consideration the impact that robot soldiers could have on pre-existing military personnel. By introducing robot soldiers, it brings up the question of how much of the military should this new technology replace? Depending on the amount of resources allocated to the development of robot soldiers, the displacement of current human soldiers could become an issue. If this technology takes off and continues to grow, we would see a decline in the number of human soldiers as they are replaced by their robot counterparts. This can have profound implications for the livelihoods of those pre-existing soldiers, as they may face job displacement or significant changes in their duties while serving. This mainly affects lower ranked members of the military, as discussed in, "Even authors who believe AI can take over some tactical or operational decision-making functions often concede that it will likely not replace human commanders entirely." (Morgan, 2020). However, there is a bright side to this, as with the introduction of this developing technology, new job opportunities may arise. "By 2020, this "technopolis" will house 80 scientific and industrial enterprises and have as many as 2,100 specialized jobs in research, experimentation, and testing." (Morgan, 2020).

The discussion of choices made by nations in the deployment of autonomous robot soldiers is an important one, as it sheds light on the broader geopolitical implications of this technology. The technology of autonomous robot soldiers is one that is constantly advancing through the development of artificial intelligence (AI). Nations that have access to this level of technology may become much more powerful in terms of warfare, causing a shift in the balance of power across the globe. Existing power structures may be disrupted or reinforced by the introduction of this technology, therefore influencing the geopolitical landscape. "In both cases, technology was translated into US military dominance. Yet, unlike in the Cold War, the robotic revolution today is sweeping across multiple nations (and non-state actors), not just the US and Soviet military industrial complexes. Thus, US empire confronts a robotizing war-scape that is both global and unpredictable." (Shaw, 2017). Historically, military dominance has been upheld by nations possessing substantial resources and technological advancements, such as the United States and the Soviet Union. However, in the present era, the accessibility of technologies like AI has increased, allowing more nations to potentially achieve their own form of autonomous robot

soldiers and potentially disrupt the established power dynamics. As noted by Shaw (2017), the United States now faces a global and unpredictable war-scape that is being transformed by the proliferation of robotic technology.

“Lethal autonomous machines will inevitably enter the future battlefield – but they will do so incrementally, one small step at a time. The combination of inevitable and incremental development raises not only complex strategic and operational questions but also profound legal and ethical ones.” (Anderson & Waxman, 2012). In the early 2010s, technology used offensively in the military was restricted by certain laws that hinder autonomy. “Current drone military aircraft are not autonomous in the firing of weapons – the weapon must be fired in real-time by a human controller” (Anderson & Waxman, 2012). But as this technology has been improved over time through developments in AI, choices have been made regarding offensive military technology that now allows the autonomous use of weaponry. “The UN Security Council Report of March 8, 2021 (UN S/2021/229) regarding a Turkish military drone that autonomously hunted humans in Libya without any human input or supervision in March 2020 is just the first of possibly many instances of autonomous attacks by military robots.” (Guerra, 2021). This instance of autonomous use of weaponry by military technology sparked some debate, signifying that the laws regarding the technology of autonomous robot soldiers and other autonomous technologies in warfare have not been finalized, and that choices are still to be made concerning the legality of this technology.

The laws surrounding this technology tie into humanitarian law as well. There have already been early concerns regarding the impact that autonomous robot soldiers could have on existing humanitarian laws, as seen in, “Quite apart from the security and warfighting implications, the U.S. government would have grave legal and humanitarian concerns about such a foreign system offered for sale on the international arms markets, let alone deployed and used.” (Anderson & Waxman, 2012). This technology may potentially breach humanitarian laws, such as eliminating surrendering or already wounded opponents on the battlefield. Possibilities such as these stress the importance of the choices regarding the legality of robot soldiers and the potential regulations that this technology must follow if it were to be deployed in real world scenarios.

Ethics play a vital part in the discussion of this technology. Autonomous robot soldiers are designed with the goal of surpassing their human counterparts, but can they truly replace them? Soldiers are faced with the moral obstacle of taking and sparing other human lives. So, who takes accountability when that moral responsibility is placed in the hands of robot? Other questions also arise such as, “Given that robots could have better situational awareness by being able to see through walls, see in the dark, or network with other computers — if soldiers chose not to use these systems, leading to a civilian casualty, would the soldiers become liable due to their choice? What would happen if a soldier disagrees with a decision rendered by AI technologies?” (Wasilow & Thorpe, 2019). Wasilow & Thorpe also go on to say - “While AI is a tool that can offload certain tasks from humans, it does not possess the agency to ultimately take responsibility for recommendations, decision-making, or even its impact on decision-making processes.” - stating that they believe that AI powered technologies are not responsible for their actions that stem from recommendations given to them by their creator. I agree with this position, as AI

powered machines do not possess the same level of conscience as humans do, and therefore should not be held accountable for any actions that may be deemed unethical.

"Moreover, a robot will never be subject to the physical, emotional, and psychological strains which contribute to so many breaches of battlefield ethics." (Wood, 2020). This extract from Wood's 'Problem with Killer Robots' brings up an interesting side to the ethics of robot soldiers that is not commonly spoken about. The implementation of robot soldiers to replace their human counterparts would not be exclusive to select nations, considering the accessibility to AI technology, which ties back into the geopolitical implications of this technology. When it comes to robot soldiers, the issue of ethics stems from human involvement. If humans were to be eliminated from the equation, we are left with programmable machines that, as Wood described, 'will never be subject to the physical, emotional, and psychological strains' that only affect those with a conscience. The advancement of this technology could also mean that these ethical issues may be temporary, only lasting throughout a transition to a new era of warfare.

In conclusion, the implementation of autonomous robot soldiers requires careful consideration of the choices made in their development and deployment. Strategically, the benefits of autonomous robot soldiers, such as enhanced precision and reduced human casualties, must be weighed against the potential risks of this technology. Moreover, the impact on pre-existing military personnel raises questions about issues such as job displacement. From a geopolitical standpoint, the choices made by nations in deploying robot soldiers have the potential to disrupt or reinforce existing power structures, highlighting the need for agreements that need to be made between nations before deployment of this technology. Legally, the development and use of autonomous robot soldiers must adhere to existing laws and regulations, particularly concerning human rights and humanitarian law. Ethically, questions arise regarding accountability, moral responsibility, and the potential breach of ethics in warfare. While autonomous robot soldiers may surpass human capabilities, they lack the same level of conscience and should not be held solely accountable for their actions. The discussion of these ethical choices serves as a reminder of the human involvement required and the need to uphold ethical principles in the use of this technology. Ultimately, by carefully navigating the strategic, legal, and ethical choices, we can strive to harness the benefits of autonomous robot soldiers while minimizing risks and ensuring responsible and ethical deployment in the real world.

STRATEGIC

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ETHICAL

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