Jingwen Du

International Workshop 2

Progression six

Pro. Schwartz

Dear Representative Izumi Nakamistu,

First, I would like to congratulate you on your new position as United Nations Under-Secretary-General of Disarmament Affairs which in charge of disarmament of conventional weapons on 29 March 2017. In this September, it was a marvelous success for UN to have the world’s first legally binding treaty prohibiting nuclear weapons opened for signature. Undeniably, under your leading and guidance, United Nations Office for Disarmament Affairs(UNODA) had been put in a tremendous endeavor for this moment, which is indispensable of the result. In other worlds, the treaty would not have come into truth without UNODA’s enduring efforts. On the ceremony, it was you who chaired 49 countries to sign the Treaty and more later in the day. Such Treaty represents the first step toward a commonly-held goal of a world without nuclear weapons. Thus, I sincerely appreciate your and UN’s long-term work for the peace of the world from the bottom of my heart.

But with recent years’ revolutionary development in technology like artificial intelligence (AI), I genuinely hope you can lead UNODA to promote disarmament efforts in the area of not only nuclear weapons but, more important, nowadays’ potential threat, fully autonomous weapons assisted by AI. As an engineering student myself, I definitely appreciate the value of innovation in the application of technologies; however, I am writing to voice my anxiety over the possibility that the lethal autonomous weapons systems end up being a hazard to human beings when it is out of control. For instance, terrorists could adopt the weapons to initiate battles as the threshold of a war will be significantly decreases when soldiers are replaced with machines.

In fact, the possibility I mentioned above is within reach. Earlier this year, I watched a fictitious video released by a champion of AI researchers and advocacy organizations led by Stuart Russel, a leading AI scientist at the University of California in Berkeley. It predicts and depicts a chaotic future when autonomous drones carrying AI become cheap and ubiquitous. I was impressed with the small size and the ability of drones to eliminate targets with face recognition and little amount explosive material without human intervention. According to Russell, “pursuing the development of lethal autonomous weapons would drastically reduce international, national, local, and personal security.” Autonomous weapons could not only lower the threshold of conflicts, but, more importantly, cheapen the value of human life and induce global instability. As the AI-powered drones illustrated in the film is “an integration of existing capabilities”, there is really not much time and opportunities left for us to avoid the catastrophic upcoming (Russel). Given that military has been one of the largest funders who adopt AI technology to invent a variety surveillance tools, some countries have put autonomous weapons system into use for such purpose. Named Samsung SGR-A1, South Korea’s fixed-place sentry gun was first of its kind with an autonomous system capable of performing surveillance and automatic firing at targets. Although the current main purpose of this weapon is to transform the current guard and observation mission on fronts conducted by soldiers into a robot system, its creation already represents the maturity of such technology which has massive destructive power. Now that the systems could only grow more developed and dangerous, how could UN and governments still allow the invention of autonomous weapons when they could foresee the possible misuse of the technology taking place in the future?

Furthermore, I believe that the risk of autonomous weapons also associates with the artificial intelligence they possess in the process of selecting targets. As any technology can be used for both good and bad, beneficial AI could definitely contribute to cracking pressing social problems with optimized solution such as unequal distribution of resources and poverty; however, a wrong use of AI would lead to unpredictable danger. For the reason that current AI researchers never know how AI will evolve after they are capable of making decisions, to benefit human beings or destroy us, we should hold a cautious attitude toward the application of AI. According to Steve Hawking, if AI passed the line where an AI becomes better than humans at AI design, we may face an intelligence explosion which means that it can recursively improve itself without human help, which will lead to either the best or worst thing ever happen to humanity. It is necessary for us to shift the goal of AI from military purpose to favorable intelligence in order to achieve the maximum chance of our survival and avoid the probability of the invention of destructive AI. This will not be a straightforward process but might require current AI researchers, UN and universal governments to work together on banning AI-powered weapons.

Needless to say, a ban on autonomous weapon systems may not as effective as the one on nuclear weapons because of the difficulty involved in acquiring raw materials and equipment needed to make nuclear weapons. In contrast, the resources and techniques involved in making AI are accessible by anyone with professional knowledge, so a ban could not literally limit their application of AI to weapons on individual’s level. Unconvinced of the effectiveness of the campaign who call for the ban beyond a symbolic gesture, Subbarao Kambhampati, an AI professor at Arizona State University (ASU), argues that “AI researchers should instead be thinking of more proactive technical solutions to ameliorate potential threat.” Thus, in his article “I'm a pacifist, so why don't I support the Campaign to Stop Killer Robots?”, he introduces his way of protecting humans rather than calling a ban. One example is how he held the workshops to address AI’s adverse outcomes “using AI technology itself as a defense against the malicious uses of AI”. Therefore, I come to see the importance of the preparation for preventing the worst case when the call for a ban fails to consider the unlimited access to the core technology AI adopted in autonomous weapons.

Introducing autonomous weapons will assist militaries to guard their countries and citizens but will cause damage to the innocence from the other countries if a war is resulted from their conflicting benefits. It is not impossible that those countries will not misuse the power to dominate resources. Therefore, along with hundreds of AI researchers who are calling for a ban on autonomous weapons including Elon Musk, Steven Hawking and Steve Wozniak, I am writing this letter for appealing you to consider the security of humans’ future as a priority. I sincerely hope you could lead UNODA to achieve greater success in disarmament of weapons by initiating a ban on autonomous weapons. It is true that a ban is limited in addressing the threat of the weapons but such a ban is an essential step toward a future free of disaster just like the Treaty prohibiting nuclear power, which raises people’s awareness of the risk of nuclear weapons in order to “keep us on the track for achieving our goal of a world in which nuclear weapons exist only in movies or books.” (Miroslav Lajčák) However, our efforts to ensure a safe and promising future should not stop on a ban but we need more practical preparation as indicated by Kambhampati to secure our survival if the worst take place. In front of the existence of human beings as a whole, it is not an exaggeration that any possible outcome should be taken into account. I believe only when researchers devote all their talents into investigating knowledge to improve human’s living standard and governments put money into supporting the beneficial technology instead of warfare, can we eventually lead to a world free of weapons where no innocent soldiers will be killed by gun.

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