CCW REPORT

Reaching Critical Will

THE URGENT NEED TO RETAIN HUMAN CONTROL OF WEAPON SYSTEMS
Mary Wareham | Campaign to Stop Killer Robots

The United States along with China, Israel, South Korea, Russia, and the United Kingdom have been investing in developing weapons systems with decreasing levels of human control in the critical functions of selecting and engaging targets. The fear is that as the human role decreases, machines will eventually take over these critical functions.

Armed drones are an example of the trend toward ever-greater autonomy, but they are still operated by a human who takes the decision to select and fire on targets. A central concern with fully autonomous weapons is that they will cross a moral line that should never be crossed by permitting machines to make the determination to take a human life on the battlefield or in policing, border control, and other circumstances.

After 20 long months, this week states are finally reconvening at the Convention on Conventional Weapons (CCW) at the UN in Geneva to discuss serious questions relating to lethal autonomous weapons systems, also known as fully autonomous weapons or "killer robots". Since the last substantive CCW meeting on the issue in April 2016, concerns have continued to mount over these future weapons, while questions have multiplied about whether the CCW can adequately address this urgent challenge in a timely and conclusive manner.

In recent months, hundreds of artificial intelligence and robotics experts from around the world have demanded swifter and stronger action by states at the CCW to prevent the development of lethal autonomous weapons systems. This includes calls for Australia and Canada to lead efforts to conclude a new international treaty to prohibit these weapons systems.

While the capabilities of future technology are uncertain, there strong reasons to believe that fully autonomous weapons could never replicate the full range of inherently human characteristics necessary to comply with international humanitarian law's fundamental rules of distinction and proportionality. Moreover, it is obvious that these weapons have the potential to commit unlawful acts for which no one could be held responsible. Existing mechanisms for legal accountability are ill suited and inadequate to address the unlawful harm that fully autonomous weapons would be likely to cause.

Because fully autonomous weapons would have the power to make complex determinations faster in less structured environments, their use could lead armed conflicts to spiral rapidly out of control. Their ability to operate without a line of communication after deployment is problematic because the weapons could make poor choices about the use of force.

While fully autonomous weapons might create an immediate military advantage for some states, they should recognize that such benefits would be short lived once these weapons begin to proliferate. Ultimately, the financial and human costs of developing such weapons systems would leave each state worse off.

For these and other reasons, nongovernmental organizations launched the Campaign to Stop Killer Robots in April 2013 to work for a preemptive ban on development, production, and use of weapons systems that, once activated, would select and fire on targets without meaningful human control.

Since that time, 19 countries have endorsed the call to ban fully autonomous weapons. Dozens of states have affirmed the importance of retaining meaningful or appropriate or adequate human control over critical combat functions of weapons systems. The Campaign to Stop Killer Robots encourages all states to endorse the call for a ban or, at minimum, to make clear their position on the ban call.

Editorial, continued

Our campaign is disappointed by some of the weak and unambitious proposals that certain states are considering working towards at the CCW. These include non-binding political declarations as well as efforts to ensure greater transparency and identify best practices for weapons reviews that are required under Article 36 of Additional Protocol I to the Geneva Conventions.

Yet weapons reviews are insufficient in addressing the many challenges raised by fully autonomous weapons. While international humanitarian law already sets limits on problematic weapons and their use, responsible governments in the past have found it necessary to supplement existing legal frameworks for weapons that by their nature pose significant humanitarian threats.

A binding, absolute ban on fully autonomous weapons would reduce the chance of misuse of the weapons, would be easier to enforce, and would enhance the stigma associated with violations. Moreover, a ban would maximize the stigmatization of fully autonomous weapons, creating a widely recognized norm and influencing even those that do not join the treaty. Precedent shows that a ban would be achievable and effective.

At these CCW meetings, the Campaign to Stop Killer Robots urges states to acknowledge the need for international regulation to address autonomy in the critical functions of weapon systems and elaborate their position on the call to prohibit systems that would lack meaningful human control.

States should agree to continue the Group of Governmental Experts in 2018, by holding at least four weeks of meetings throughout the year. States should retain the long list of topics contained in the GGE mandate agreed by the Fifth Review Conference. They should focus specifically on lethal autonomous weapons systems rather than broader questions relating to artificial intelligence and autonomy.

Rolling over the mandate for another year is the least that CCW states can do on this topic. After three years of informal talks, our campaign strongly believes that it's time for states to commit to negotiate and adopt an international, legally binding instrument that prohibits the development, production, and use of fully autonomous weapons.

If that is not possible under the auspices of the CCW, then it may be time to leave this inconclusive talk shop. We stand ready to work with states interested in exploring all possible mechanisms to ban fully autonomous weapons without delay. This is not an esoteric exercise. Rather the future of our humanity depends on it. •

SIDE EVENT BRIEFING

Rationale for Banning Fully Autonomous Weapons

Monday, 13 November 2017
13:15-14:45

Conference Room XXVII
United Nations Geneva

Introductory Remarks
- Prof. Toby Walsh, University of New South Wales

Speakers
- Prof. Denise Garcia, International Committee for Robot Arms Control
- Mr. Daan Kayser, PAX
- Ms. Ara Marcen Naval, Amnesty International
- Mr. Richard Moyes, Article 36

Moderator
- Ms. Mary Wareham, Campaign to Stop Killer Robots

EXPERTS APPEAL TO GOVERNMENTS TO PROHIBIT AUTONOMOUS WEAPONS

Paul Hannon | Mines Action Canada

Last week on the same day, artificial intelligence (AI) researchers in Australia and Canada released letters calling on their governments to support a ban on autonomous weapons. The Australian letter,[1] addressed to Prime Minister Malcolm Turnbull, was signed by more than 100 AI experts. The Canadian letter, signed by more than 200 AI experts, was addressed to Prime Minister Justin Trudeau. Both letters were released publically one week before the Group of Governmental Experts of the CCW was scheduled to finally start its work in Geneva.

The Australian letter was organized by Toby Walsh, Scientia Professor of Artificial Intelligence at the University of New South Wales. The letter was signed by more than 122 faculty members including Deans and Heads of Schools as well as dozens of professors of AI and robotics. The Australian letter begins with the Australian AI research community applauding the Prime Minister "for placing innovation at the centre of your plans for Australia." The letter notes that AI is "of transformative significance. The transformations—actual and potential—demand our understanding and, increasingly, our heightened moral attention." It is for those reasons that the Australian research community "is calling on you and your government to make Australia the 20th country in the world to take a firm global stand against weaponizing AI."

In an opinion piece[2] published the same day, Prof. Toby Walsh wrote, "I'm most worried not about smart AI but stupid AI. We will be giving machines the right to make such life-or-death decisions, but current technologies are not capable of making such decisions correctly." He concluded that we "cannot stop AI technology being developed. It will be used for many peaceful purposes like autonomous cars. But we can make it morally unacceptable to use to kill, as we have decided to do with chemical and biological weapons."

The Canadian AI letter[3] also notes the transformative significance of AI and also calls for Canada to be the 20th country in the world to take a firm global stand against weaponizing AI. The letter, written by Ian Kerr, Canada Research Chair in Ethics, Law and Technology (University of Ottawa; Yoshua Bengio, Canada Research Chair in Statistical Learning Algorithms (University of Montreal); Geoffrey Hinton, Engineering Fellow, Google and Chief Scientific Advisor, The Vector Institute; Rich Sutton, AITF Chair in Reinforcement Learning and Artificial Intelligence (University of Alberta) and, Doina Precup, Canada Research Chair in Machine Learning (McGill University), was originally signed by more than 200 experts in Canada. It is an open letter and more people continue to sign.

The Canadian letter also states that that lethal "autonomous weapons systems that remove meaningful human control from determining the legitimacy of targets and deploying force sit on the wrong side of a clear moral line." The letter requests that Canada should commit to working with other states to conclude a new international agreement. "Many members of our research community are eager to lend their expertise to the Government of Canada in this regard" it continues. If developed, lethal autonomous weapon systems (LAWS) "will permit conflict to be fought on a scale greater than ever, and at timescales faster than humans can comprehend. The deadly consequence of this is that machines—not people—will determine who lives and dies. Canada's AI community does not condone such uses of AI. We want to study, create and promote its beneficial uses."

These letters are significant for two reasons. They are the first letters or petitions addressed to national leaders calling on them to not only make their country the next one to call for a ban on LAWS, but to also work with other governments to make that ban a reality. In an opinion piece[4] also released on the same day as the letter, Dr. Kerr noted, "it is not often that captains of industry, scientists and technologists call for prohibitions on innovation of any sort, let alone an outright ban. But the Canadian AI community is clear: We must not permit AI to target and kill without meaningful human control."

In addition, they clearly indicate that those whose livelihoods, careers, and expertise are directly involved with further research of AI are not worried that a ban would adversely impact civilian applications of AI. In fact, the letters are a clear appeal to ban LAWS in order that should beneficial developments can flourish.

Both letters are also a reminder of the importance of national positions and legislation. In the past when the CCW failed to take clear action on landmines and cluster munitions it was national legislation and actions in a few countries to ban those weapons that resulted in two strong and effective international treaties. •

Notes
1. http://bit.ly/2hlfXjD
2. http://bit.ly/2ybHSsY
3. https://techlaw.uottawa.ca/bankillerai
4. https://tgam.ca/2hrdyr1

This week, Dutch peace organisation PAX releases two new reports. Keeping control (www.paxforpeace.nl/publications/all-publications/keeping-control) provides an overview of the positions of European states on lethal autonomous weapon systems or killer robots. It analyses where states take similar positions and where they diverge. The report concludes that technology continues to develop at a rapid pace and that it is therefore crucial that states decide as soon as possible on where to draw the line of what is acceptable and what is unacceptable regarding autonomy in weapon systems. This includes deciding what actions and decisions need to remain under human control and how to ensure this control is meaningful.

The second report, Where to draw the line (www.paxforpeace.nl/publications/all-publications/where-to-draw-the-line), shows the trend towards increasing autonomy in weapon systems by identifying a number of systems which have the ability to select and attack targets with automated 'critical' functions. These weapons include loitering munitions, unmanned bomber aircraft as well automated ground systems with varying levels of human control. It illustrates that key autonomous features are rapidly emerging and becoming key aspects of tomorrow's weapons. •