

Lethal Autonomous Weapons Systems aka “killer robots”

Professor Noel Sharkey Chair of International Committee for Robot Arms Control

Since 2003 the roadmaps of all US forces have been pushing forward the military usefulness of autonomous weapons systems. These are weapons that once activated can track, select and attack targets without further human intervention.

Several nations have been developing prototypes of these systems for use in the air, on the ground, at sea and under the sea. These include, US, China, Russia, UK and Israel. Such weapons are an unprecedented move towards the automation of violent force in conflict.

Moral issues; delegating the decision to kill to a machine crosses a fundamental moral line. As General Latiff said, “it is the ultimate human indignity”. These words have been echoed by Christof Heyns (UN Special Rapporteur) to the Human Rights Council (2013) and to the UNGA 3rd Committee (2014) when he called for a moratorium on research, testing and production of lethal autonomous robots while nations considered their use and regulation. We need to consider Marten’s clause.

Technical difficulties for compliance with International Law:

The currently available methods of sensing are inadequate for

- (i) **the principle of distinction.** Machines are incapable of adequate discrimination between combatants and civilians or others hors de combat. This will gradually improve over time but the consensus from recent expert meetings at ICRC, Chatham House and the CCW expert meeting (all in 2014), is that the principle of distinction is not viable for the foreseeable future.
- (ii) **the principle of proportionality:** software may help to reduce the amount of collateral damage, but it cannot assess whether or not an attack is proportionate to military advantage. This is the key element in a proportionality decision and it is not a quantitative measure. It takes an experienced commander with situational awareness to assess the military advantage and the likely risks to the civilian population.
- (iii) **Precaution** and the Legitimacy of targets. Targets need to be reassessed on the field as their status can change unpredictably. An objective can turn from a military target into a civilian hub and a robot would not be able to make such assessments with sufficient reliability.

Weapons reviews (Article 36) would be very difficult since the programs for autonomous weapons cannot be formally verified. They need to be empirically tested which would leave an unacceptable risk of unpredictability in unanticipated circumstances.

Security issues:

(i) There is concern that autonomous weapons systems could unintentionally trigger conflicts; (ii) The plans are to use these weapons in swarms but no one can predict how unknown combat algorithm would interact; (iii) they could lower the threshold for starting conflicts (no body bags coming home).

The Campaign to Stop Killer Robots, a coalition of 54 NGOs from 26 nations, was launched in April 2013 to call for a new international legally binding treaty to prohibit the development, production and use of fully autonomous weapons systems. Meaningful human control is required for all weapons systems. They issues are now commanding significant attention at the UN and the CCW.