

Discriminant Actions Via (Semi-) Autonomous Weapons Systems: Matching Emergent Capabilities With Legal Prescriptions

By Kevin H. Govern

Abstract

In the conduct of military operations, constant care must be taken to spare noncombatant civilians and protected civilian objects: to do everything feasible to verify that the objectives to be attacked are military objectives; and, take all feasible precautions in the choice of weapons with a view to avoid or in any event minimize incidental loss of civilian life. In the study, development, acquisition or adoption of a new weapon or method of warfare, States Parties have an obligation to determine whether its use would, in some or all circumstances, be prohibited by Article 36 of additional Protocol I or by any other rule of international law.

The study of autonomy of weapons systems centers on the absence of a "man in the loop" and related issues of target identification. Automatic systems follow specific pre-programmed commands with little room for variation in a "structured environment," while autonomous weapons have more freedom to determine their own actions in an "open and unstructured" environment. Human rights advocates and ethicists debate whether it is feasible to program International Humanitarian Law (IHL) or international human rights law (IHRL) compliance, specifically and especially with IHL rules on distinction, proportionality and precautions if such systems lack the "man in the loop." Legitimate concerns aptly come regarding legal liability and/or moral responsibility lie for failure or violations. Apt concerns exist whether fully autonomous weapons function in an ethically "correct" manner to make life and death decisions, especially but not solely differentiating between combatants on the one side and defenseless and/or uninvolved persons on the other side.

This paper will examine these issues and more with respect to autonomy in weapons systems, and the calls that these weapons be preemptively banned by international convention. As both a normative as well as descriptive example of applying *lex lata* while developing *lex ferenda*, I will cite how the US has become the first nation to issue a governmental policy statement on the use of these weapons, and to provide both a methodology and a timeline for integrating technology development and the ethical and practical aspects of employing and deploying that technology. This requires an understanding IHL obligation and ethical action integral aspects to how operators make informed and appropriate decisions in engaging targets, and designating means and methodology of the interface between people and machines for autonomous and semi-autonomous weapon systems. Advances in artificial intelligence may well eventually enable systems to make combat decisions and act within legal and policy constraints without necessarily requiring human input. This paper will explain why present US mandates keeping humans in the loop for any decision about the use of lethal force for up to 10 years into the future will be sufficient time for adequate legal, ethical, and political debate, as well as systems development, before steps ever are taken for full weapons autonomy without human input.