

Noel Sharkey,

Emeritus professor of robotics and artificial intelligence and professor of public engagement, Sheffield Centre for Robotics, University of Sheffield., UK Chair of the International Committee for Robot Arms Control

The Human Control of Weapons: a humanitarian perspective

Abstract

There is an ongoing technological transformation in warfare with ever more control of weapons being delegated to computer systems. There is considerable international concern among states and civil society about where humans fit into the control loop. Rather than move to a point where computer programs control the weapons, it is proposed here that hitech nations should set the specific goal of developing weapons that enable zero civilian casualties and facilitate combatant surrender. With the right balancebetween the best of human abilitiesand the best of computer functionality we could progress towards this goal and have significantly greater humanitarian effect. The psychological literature on human decision-making provides a foundation for the type of control required for weapons. A human control classification is provided that reframes autonomy/semi-autonomy in terms of levels of supervisory control. This allows for greater transparency in command and control and the allocation of responsibility.