theguardian

Rise of the drones poses growing dilemma for military

MoD confronts moral and legal issues as armed robots increasingly take warfare out of human control

Richard Norton-Taylor
guardian.co.uk, Monday 2 April 2012 11.00 EDT

A US Predator drone flies above Kandahar air field, southern Afghanistan. Photograph: Kirsty Wigglesworth/AP

Drones, armed with cameras and increasingly with bombs and missiles, are fast becoming a key weapon of modern warfare. The US regards the pilotless aircraft as vital in operations in Afghanistan, but particularly in attacks on suspected insurgents and al-Qaida remnants across the border in Pakistan.

The Obama administration has dramatically stepped up the use of CIA drones, not only along the Afghan/Pakistan border, but in Yemen and Somalia. Israel is at the forefront of drone technology, but Britain and France have been slow to invest in these increasingly sophisticated aircraft.

As drones are operated remotely and are targeted using intelligence that is often unclear or mistaken, it is scarcely surprising that they strike innocent civilians.

It is no great surprise, either, that US scientists have been toying with the idea of nuclear-powered drones since range and endurance are key to the crafts' usefulness.

Both warships and merchant ships are nuclear-powered but they are much less vulnerable than drones. However high they fly, beyond the reach of ground-based rockets or missiles, there will always be the risk of drones crashing.

A year ago, in a study the Ministry of Defence does not discuss, its own internal thinktank warned that the growing use of unmanned aircraft in combat situations raised huge moral and legal issues, and threatened to make war more likely as armed robots took over from human beings.

The report warned of the dangers of an "incremental and involuntary journey towards a Terminator-like reality", referring to James Cameron's 1984 movie, in which humans are hunted by robotic killing machines. It said the pace of technological development was accelerating at such a rate that Britain must quickly establish a policy on what will constitute "acceptable machine behaviour".

The report, The UK Approach to Unmanned Aircraft Systems drawn up by the MoD's Development, Concepts and Doctrine Centre (DCDC), adds: "It is essential that before unmanned systems become ubiquitous (if it is not already too late) ... we ensure that, by removing some of the horror, or at least keeping it at a distance, we do not risk losing our controlling humanity and make war more likely".

The US-manufactured General Atomics Reaper is at the moment the RAF's only armed unmanned aircraft. It can fly for more than 18 hours, has a range of 3,600 miles, and can operate at up to 15,000 metres (50,000ft). The Reapers, armed with Paveway bombs and four Hellfire missiles, are operated by RAF personnel based at Creech in Nevada. They are controlled by satellite datalink.

By 2030, almost a third of the RAF could be made up of remotely controlled planes, which by then will be operated from a base in East Anglia.

The MoD has been funding the development by BAE Systems of a long-range unmanned aircraft, named Taranis after the Celtic god of thunder. It is designed to fly at "jet speeds" between continents while controlled from anywhere in the world using satellite communications. Under current plans, they will not be nuclear-powered.

;