

Ethical, Legal and Societal Aspects of Unmanned Aircraft in Defence

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Abstract : Suboptimal adoption of AI in defence organisations carries risks for the protection of the freedom, safety, and security of society. Despite the vast opportunities that defence AI-technology presents, there are also a variety of ethical, legal, and societal concerns. To ensure the successful use of AI technology by the military, ethical, legal, and societal aspects (ELSA) need to be considered, and their concerns continuously addressed at all levels. This includes ELSA considerations during the design, manufacturing and maintenance of AI-based systems, as well as its utilisation via appropriate military doctrine and training. This raises the question how defence organisations can remain strategically competitive and at the edge of military innovation, while respecting the values of its citizens. This paper will explain the set-up and share preliminary results of a 4-year research project commissioned by the National Research Council in the Netherlands on the ethical, legal, and societal aspects of AI in defence. The project plans to develop a future-proof, independent, and consultative ecosystem for the responsible use of AI in the defence domain. In order to achieve this, the lab shall devise a context-dependent methodology that focuses on the 'analysis', 'design' and 'evaluation' of ELSA of AI-based applications within the military context, which include inter alia unmanned aircraft. This is bolstered as the Lab also recognises and complements the existing methods in regards to human-machine teaming, explainable algorithms, and value-sensitive design. Such methods will be modified for the military context and applied to pertinent case-studies. These case-studies include, among others, the application of autonomous robots (incl. semi- autonomous) and AI-based methods against cognitive warfare. As the perception of the application of AI in the military context, by both society and defence personnel, is important, the Lab will study how these perceptions evolve and vary in different contexts. Furthermore, the Lab will monitor - as they may influence people's perception - developments in the global technological, military and societal spheres. Although the emphasis of the research project is on different forms of AI in defence, it focuses on several case studies. One of these case studies is on unmanned aircraft, which will also be the focus of the paper. Hence, ethical, legal, and societal aspects of unmanned aircraft in the defence domain will be discussed in detail, including but not limited to privacy issues. Typical other issues concern security (for people, objects, data or other aircraft), privacy (sensitive data, hindrance, annoyance, data collection, function creep), chilling effects, PlayStation mentality, and PTSD.

Keywords : autonomous weapon systems, unmanned aircraft, human-machine teaming, meaningful human control, value-sensitive design

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