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THE COMPUTATIONAL TURN: PAST, PRESENTS, FUTURES?

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“The Computational Turn: Past, Presents, Futures?”

Dear participants,

In the West, philosophical attention to computation and computational devices is at least as old as Leibniz. But since the early 1940s, electronic computers have evolved from a few machines filling several rooms to widely diffused – indeed, ubiquitous – devices, ranging from networked desktops, laptops, smartphones and “the internet of things.” Along the way, initial philosophical attention – in particular, to the ethical and social implications of these devices (so Norbert Wiener, 1950) – became sufficiently broad and influential as to justify the phrase “the computational turn” by the 1980s. In part, the computational turn referred to the multiple ways in which the increasing availability and usability of computers allowed philosophers to explore a range of traditional philosophical interests – e.g., in logic, artificial intelligence, philosophical mathematics, ethics, political philosophy, epistemology, ontology, to name a few – in new ways, often shedding significant new light on traditional issues and arguments. Simultaneously, computer scientists, mathematicians, and others whose work focused on computation and computational devices often found their work to evoke (if not force) reflection and debate precisely on the philosophical assumptions and potential implications of their research. These two large streams of development - especially as calling for necessary interdisciplinary dialogues that crossed what were otherwise often hard disciplinary boundaries – inspired what became the first of the Computing and Philosophy (CAP) conferences in 1986 (devoted to Computer-Assisted Instruction in philosophy).

Since 1986, CAP conferences have grown in scope and range, to include an extensive array of intersections between computation and philosophy as explored across a global range of cultures and traditions – issuing in fruitful cross-disciplinary collaborations and numerous watershed insights and contributions to scholarly reflection and publication. In keeping with what has now become a significant tradition of critical inquiry and reflection in these domains, IACAP'11 celebrates the 25th anniversary of CAP conferences by focusing on the past, present(s), and possible future(s) of the computational turn.

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IS THERE A HUMAN RIGHT NOT TO BE KILLED BY A MACHINE?

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1. Extended Abstract

This presentation reviews the standard frameworks for considering the human right not to be killed, and its forfeit by combatants in a war. It then considers as a special case the right not to be killed by a machine. Insofar as one has a right not to be killed by any means, then one also has a right not to be killed by a machine, such as a lethal robotic system. It is further argued that in those cases in which an individual may have already forfeited their right not to be killed, such as when acting as a combatant in a war, this does not necessarily subject one to being killed by a machine. Despite a common view that combatants in war may be liable to be killed by any means, “killing by machine” fails to meet the requirements for ethically justifiable killing. The defense of this assertion will rest on a technical definition of “killing by machine,” and further clarification of justified killing in war. In short, the argument is that “killing by machine” fails to consider the rights of an individual in the morally required manner. This is because “killing by machine” requires a “decision to kill” to be made by a moral agent, and an automated decision cannot involve the necessary moral deliberation required to justify violating the human right not to be killed. As such, automated decisions to kill are not morally justifiable.

The argument begins by examining the right to self-defense which forms the rights-based interpretation of Just War Theory. In particular, I examine the “Castle Laws”, aka “Make My Day Laws,” which permit individuals to use force against home-intruders without criminal or civil liability in many U.S. states. I examine the conditions under which individuals in such circumstances are permitted to use lethal force, and when such force becomes “willful and wonton misconduct.”

Informed by this analysis, I examine the legality of a home-defense robot, and the legal permissibility of its use of force against home-intruders. In general, the “Castle Laws” do not allow homeowners to booby-trap their homes, and a robotic home-defense system can be viewed as a sophisticated booby-trap. I consider the various objections that might be made to the standard rejection of booby-trap. According to such objections, a robot with sophisticated cognitive and perceptual capabilities might be argued to avoid manifesting a form of “reckless endangerment.”

I then analogize from the case of home-defense in civil and criminal law, to the case of self-defense in war, and the Laws of Armed Conflict and Just War Theory. While warfare has much looser standards of what constitutes a “threat,” and the proximity of threats, the use of systems capable of automated lethal decision-making is largely analogous to the domestic use of booby traps.

I conclude that implicit in both domestic law and international laws of armed conflict is requirement for moral deliberation which undermines the moral and legal legitimacy of automated lethal decision making. This has serious implications for the use of autonomous lethal robotics in police and military applications. One implication is that only artificial moral agents, capable of exercising moral autonomy, could be morally and legal justified in violating the rights of a human.