

Do robots equal humans? Anthropomorphic terminology in LAWS

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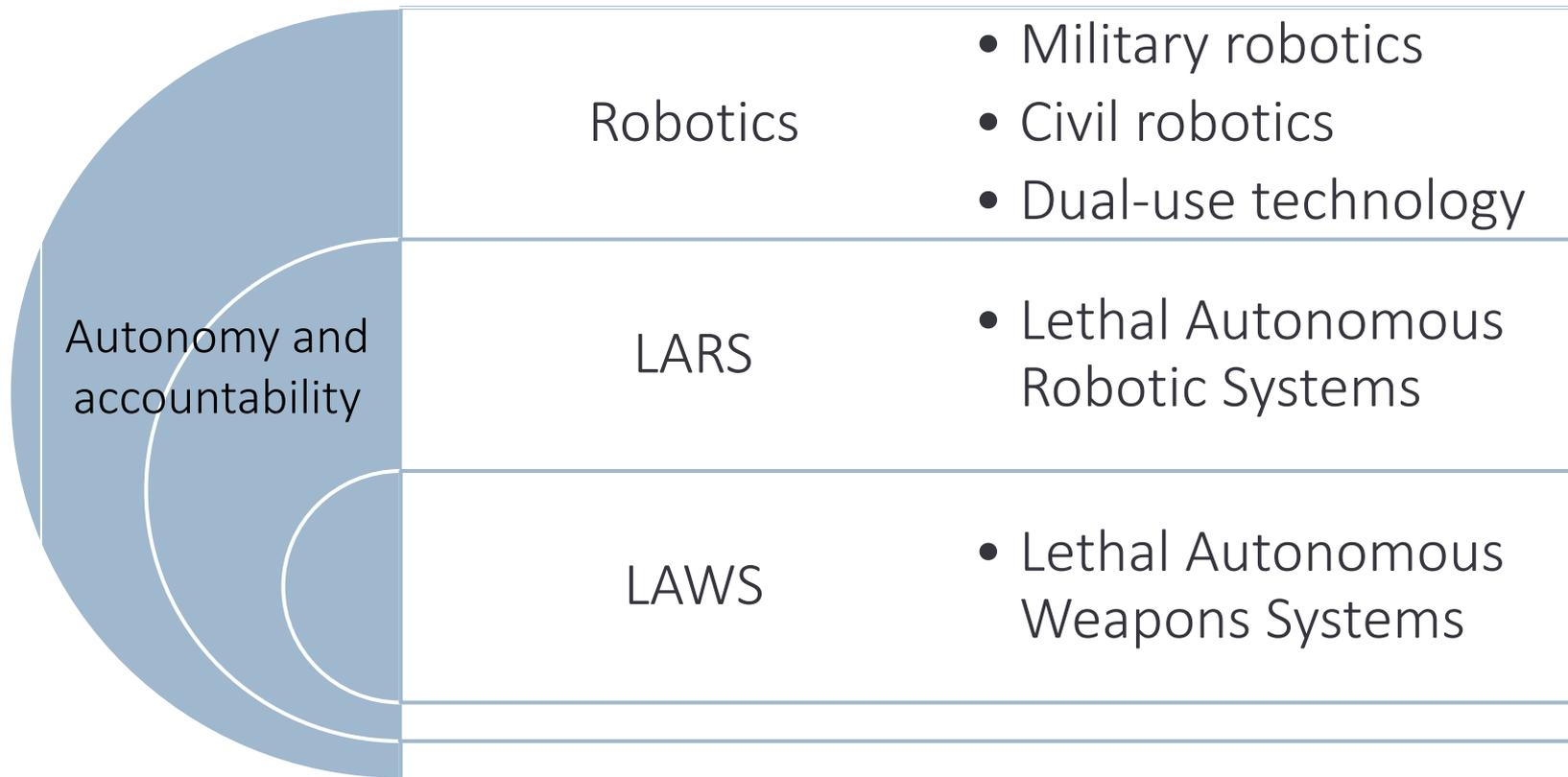
13-17 April 2015



Overview

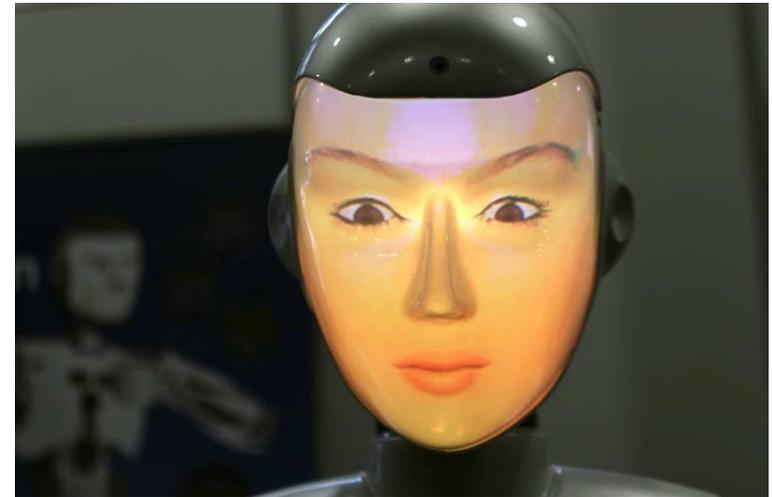
- Key concept: anthropomorphism, i.e. attribution of human characteristics to nonhumans
- Method of anthropomorphisation: the use of a particular terminology
- Goal: **A new approach towards anthropomorphic terminology with the goal to reduce the anthropomorphic effect**
- Expected result: conceptual clarity and increased public acceptance of autonomous robotic systems

LAWS and Robotics



Anthropomorphism

- Attribution of human form and behaviour to nonhumans (creatures, objects, phenomena)
- Universal human tendency
- Only recently addressed by researchers
- Hindrance vs. useful mechanism



Engineered Arts Ltd - SociBot
Photo by K. Zawieska

What is human and humanlike?

“We all have an intuitive understanding of when something is alive or not.”

Anthropomorphism in robots

- The main frame of reference for robot design is often the human being:
 - robots being human
 - potentially human
 - not sufficiently human
- Humanlike \neq human:
robots appear human rather than actually are human



ICub
Photo by K. Zawieska



IBIS
Photo by PIAP

Anthropomorphic terminology in LAWS

- Autonomy
- Intelligence \implies LAWS/robots
- Decision-making
- Self-awareness \implies Human beings
- Morality

Robots seen as equal or even better than humans?

The risk of assigning the human level tasks and responsibility to robots based on the illusion of humanness

Anthropomorphisation of LAWS: hindrance

Risks and ethical concerns:

1. Misleading framework of interpretation
2. Dehumanisation of human beings
3. Unpredictable impact on the civil domain

Misleading framework of interpretation

- It is impossible to translate human qualitative features into engineering and computer terms
- The same terms have different meanings when applied to humans and robotic systems
- Anthropomorphic terms often do not match the actual characteristics of robots (robot autonomy questioned)



LEMO and PIAP employees
Photo by PIAP



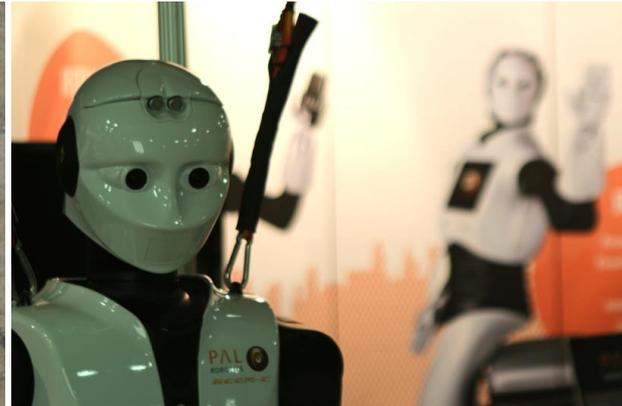
PIAP SCOUT®
Photo by PIAP

Dehumanisation of human beings:

- Robots can be defined as highly humanlike/equal to humans only if we reduce human beings to single characteristics and quantitative measurements
- How we approach autonomous robotic systems is both a reason and a result of a particular view of the human being developed in our culture



INSPECTOR steering console
Photo by PIAP



PAL ROBOTICS - REEM-C
Photo by K. Zawieska

Unpredictable impact on the civil domain

- Autonomy is a key requirement for many of the current robotic systems (e.g. autonomous cars or social robots)
- The decisions made regarding tasks, autonomy and accountability assigned to LAWS may have direct consequences on civil robotics
- While raising concerns about LAWS we risk rejecting robotics technology as a whole

New approach towards terminology

The use of the existing terms or the development of a new terminology in a way that allows us to:

1. Embrace the human tendency to anthropomorphise
2. Stress the difference between the human and humanlike

Examples:



Expected results

1. Accurately describe the current state of robotics:
facilitate discussion on LAWS in relation to not only human soldiers but also other types of weapons
2. Develop a human-centered approach towards accountability:
stress that human \neq humanlike and assure that the only subject responsible for the use of weapons is the human being
3. Increase public acceptance:
bring clarity to the public debate on autonomous robotic systems for civil and military applications

Conclusions

- Anthropomorphism is about being “humanlike” and not “human”.
- We shall use of the terminology that stresses the difference between the human and humanlike and reduces the anthropomorphic effect.
- We shall never compromise the anthropocentric perspective on LAWS where the only subject responsible for the use of weapons is the human being.