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Whose Robot is it Anyway?
Liability for AI-Based-Robots

The Geneva Cybersecurity Law & Policy
Conference

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Overview

- What is AI?

- The Problems of AI-Based Robots
  - Agency
  - Foreseeabilty

- Mapping the Existing Framework

- Deficiencies of Current Liability Doctrines

- Suggesting Supplementary Rules

Defining AI-Based-Robots

- Robot = bot – any physical/digital embodiment

- GOFAI – 1st generation AI. A lot of "normal" code lines.

- Machine Learning – 2nd generation AI. Program becomes the programmer.

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- Unforeseeable outcomes
  - The Tay bot and Facebook chatbot cases

Bob: i can i i everything else . . . .
Alice: balls have zero to me to me to me to me to me to me to me to me to
Bob: you i everything else . . . .
Alice: balls have a ball to me to me to me to me to me to me to me
Bob: i i can i i i everything else . . . .
Alice: balls have a ball to me to me to me to me to me to me to me
Bob: i . . . .
Alice: balls have zero to me to me to me to me to me to me to me to me to
Bob: you i i i i i everything else . . . .
Alice: balls have 0 to me to me to me to me to me to me to me to me to
Bob: you i i i everything else . . . .
Alice: balls have zero to me to me to me to me to me to me to me to me to.

- Liability requires an agent
  - Robots cannot be the subjects of liability

Potential Risks and Damages

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- Physical injury

- Damage to property

- Privacy violation

- Non-monetary damages

- Denial-of-service of critical services

- Damage to Autonomy

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- Liability types:
  - Product liability
  - Abnormal Dangerous Activities
  - Negligence (and contributory negligence)
  - Strict Liability
  - Mandatory collective insurance

- Regulated agents:
  - Manufacturers (designers, programmers, engineers)
  - Distributors (including for OEM components)
  - Operators (AI-as-a-service)
  - Users

The Agency Problem

- Robots are not legal "agents" (yet)

- How can we attribute an act of an autonomous device to a human agent?

- Vicarious liability, principal-agent relationship?

The Foreseeability Problem

- Some AI outcomes cannot be foreseen by definition

- Even if some functionality could be logged and traced back, the algorithm cannot necessarily be explained

- Without foreseeability, tort law struggles with imposing liability

Existing Liability Rules and Their Shortcomings

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- Product Liability – design defect theory is difficult to apply given unforeseeability

- Abnormally Dangerous Activities – not necessarily dangerous. AI-robots will eventually be commonly used in commerce

- Negligence – What is the standard of care? How can we conduct cost-benefit analysis without foreseeability?

- Strict liability – designer is not necessarily better situated to determine the risks and prevent them. No party has perfect information.

- Mandatory Insurance – geography-sensitive, not applicable to digital embodiments, premiums are almost impossible to determine due to unforeseeability.

- Oversight and monitoring duties

- Mandatory backdoors ("emergency brakes" by design)

- Duty of instruction

- Ongoing service and patching duties

Thank You

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