

AI, ethics and regulation:
AI is the new regulatory tool

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Multilevel regulation of AI: are new regulatory tools the
future or simply the emperor's new clothes?

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AI: autonomous network systems

- Intelligence is composed of:
 1. *sensory perception*,
 2. *decision making* (information processing based on data and knowledge) and
 3. *performing selected motor functions* (e.g. communicate, drive, operate);
- Traditional technology is mainly an extension of sensory and motor functions (e.g. communication and transport technology, (medical) instruments);
- With traditional technology *we* still are the main sensors and decision makers;
- What is distinctive about AI is that it also takes over sensory perception and decision making;
- Moreover, most AI is part of a network of data and intelligent entities (like us humans);
- Decision making in trade, in transport, in medicine, etc. depends on context:
 1. *data gathered* (market data, traffic/weather data, medical and biological data, etc.) and
 2. *communicated decisions of other intelligent participants* (e.g. other natural *and* artificial traders, drivers, doctors);
- Intelligent entities performing in a network are unpredictable (autonomous), because their decisions depend on dynamic external data and decisions of other entities that are not known before the action takes place;

Liability is based on predictability

- Liability is based on predictability;
- A natural person is liable
 - in most cases in which he is culpable (he can be blamed) and
 - in some cases in which he is just conscious of the risk he takes;
- If a natural person is not culpable and not conscious of the risk he is not liable (unless he blindly signed for liability);
- If AI is part of a network system it is unpredictable and as a consequence its human principal cannot determine his/its will and cannot be liable;
- This argument was a.o. corroborated by the flash crash of the 6th of may 2010 (2:32 pm EDT):
 - Until today a trader using AI was not held liable and was not criminally prosecuted for causing a loss of a 1000 billion dollars on Wall street;
 - No transactions of the AI were reversed (the AI is therefore also legally autonomous).

AI *is* the new regulatory tool

- There is just one solution for this problem:
 - providing AI with ethical and legal norms of its own;
- Theses:
 - AI in networks cannot be transparent;
 - a principal of non transparent AI cannot be liable;
 - AI can be held responsible for its actions if it is culpable (it violates its internal rules) or consciously takes a risk (has the knowledge that the risk can occur);
- The penalty for AI liability can be
 - the death penalty (*forbid* the use of the AI);
 - incarceration (*special prevention*, quarantine);
 - re-education (*oblige* the insertion of new rules)
 - paying damages (most AI operating in a market disposes of assets like data and (virtual) currency);
- So AI *is* the new regulatory tool!

Theses

1. AI in networks cannot be transparent;
2. A principal of non transparent AI cannot be liable;
3. AI can be hold responsible for its actions if it is culpable (it violates its internal rules) or consciously takes a risk (has the knowledge that the risk can occur).