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Contract Law and Liability in the field of Robotics

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Do we have a problem already?

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- High Frequency Trading example
 - HFT is a kind of algorithmic trading (e.g. on stock market) which encompasses trading systems heavily (totally?) reliant on algorithms (*algos*);
 - The idea revolves around a very high-volume short-term trade transactions effectively performed by a computer program
 - In practice, in 2012 more than 60 percent of all futures transactions made on U.S futures market were made by HFT.

What if an (autonomous) robot were to conclude a contract?

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What is required to form a contract:

- Legal capacity (capability to be the subject of rights and obligations under civil law)
- Capacity to exercise rights (capability to make a declaration of intent/to make an offer/to accept an offer)
- A declaration of intent/offer/acceptance

Declaration of intent made by a robot



Possible scenarios to consider:

- robot showing an intent to enter into contract on its behalf
- a robot showing an intent to enter into a contract on behalf of someone else:
 - autonomous robot (a robot that is capable to make its own decision)
 - non-autonomous robot

Declaration of will made by a robot

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- Can it express intention (make a statement of will) of its „principal”
 - non-complex algorithm („messenger”)
 - more complex algorithm
- What is required to form an intention?

What does „intention” (declaration of intent) mean?



„An external display of making a decision to
trigger legal effect”

A decision made by an algorithm

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Problems:

- Is there any actual „decision“ to enter into contract
 - is „programming“ or making decision to use a program sufficient?
 - Pros: Certainty, confidence of the other party.
 - Cons: when we make such decision we might not know what contract we would end with; it is hard to say that there was a decision to make some legal effect;
- what about the decision of the other party?

A decision made by an autonomous robot



Problems:

- There is no action that could be even remotely considered as declaration of intent made by a person;
 - A contract is concluded if: (a) the parties intend to be legally bound, and (b) they reach a sufficient agreement without any further requirement (The Principles of European Contract Law)
- No legal capacity;
 - It is hard to identify a concept which would allow us to attribute legal effects of robot's action to a human (from a contract law perspective)

Main problem; definition of autonomous robot

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Omnis definitio in iure civili periculosa est, parum est enim, ut non subverti potest

every definition in civil law is dangerous, for rare are those that cannot be subverted

- Considered concepts:
 - Legal capacity/legal status (recognition as a subject in the field of law), strict liability
 - Compulsory insurance system
 - Compensation fund
- The effectiveness of such concepts is based on definition of robot autonomy

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Thank you for your attention

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