



The Law of Electronic Agents

Examples and Applications

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Law and agents

1. Legal issues related to the use of electronic agents (contracts, torts, privacy, IP, etc.)
2. The law as a paradigm for institutions of agent societies, and especially for the institution of self-organising societies.

Initiatives: ECLIP, ALFEBIITE, LEA02, LEA03
(ICAIL)

The lovely Rita scenario

1. An radio station uses a mobile agent to buy tracks on line
2. The agent contacts owners of IPR
3. The agent negotiates price and conditions of user
4. The agent makes a contract
5. The contract is executed

The wrong questions

What legal categories apply to SAs:

- Are SAs legal subjects or objects?
- Are SAs persons or tools?
- Are SAs (morally or legally responsible) individuals or are they just things?

Conclusion: This is their legal discipline ...

The problem of intentionality

Many legal notions (a contract, a promise, a tort, a crime) include intentional (psychological) aspects.

Shall we

- Apply to agents the same (intentional) notions we are applying to humans? or
- Add new, behaviouristic notions, to be applied to agents? or
- Provide new purely behaviouristic notions to both humans and agents?

Unpredictability

A user does not know and therefore cannot want what is done by his agent

- Factual unpredictability: complexity of the agent + complexity of its environment make it impossible to forecast the agent's action
- Practical unpredictability: the agent is a cognitive tool and therefore it would be unreasonable to invest energies in anticipating the results of the agent's cognition

Practical unpredictability

Implications of practical unpredictability:

- The user does not know and want what the agent is doing
- The other party is aware that the user does not know and want

Problem: Can an agent make legal actions which require certain cognitive states (or the other party's belief in their existence)?

The counterparty's position

The counterparty of a SA knows that:

- the agent has been delegated to act on the user's behalf
- the user has no intention of making that specific contract

The counterparty does not have access to

- The computer program constituting the SA
- The instructions the user gave to the SA

The problem of intentionality in SAs

- the actions of the agent are not accompanied by a corresponding intentionality of its user
- what intentional states did the agent have (covariation)

Intentionality in SA

From a legal perspective two issues become relevant:

- what intentional states were attributed to the agent by its counterparties (the intentional stance)
- what intentional states did the agent have (covariation)

Intentionality in SA II

An agent has a certain intentional state iff,

- by attributing such states an observer can explain the agent's behaviour (a behaviouristic approach)
- it has internal conditions which play the cognitive function proper to that intentional state (a realistic approach)

Kinds of legal subjectivity

We need to distinguish three different aspects in legal “subjectivity”:

- cognitive subjectivity: having cognitive states that are legally relevant
- responsibility: bearing the legal consequences issuing from certain facts of acts
- personhood; having rights and duties on one’s own

The sense of responsibility I

When we say that one is responsible:

- for a damage (possibly caused by others) we just mean that one will have to restore that damage
- for a contract, we just mean that one will have the obligation to perform the obligations stated in the contract

Responsibility, its grounds II

When we say that one is responsible:

- for a damage (possibly caused by others) does not entail that one has culpably contributed to producing the damage
- for a contract, we do not mean does not entail that one has chosen to enter the contract

These are just the usual preconditions of responsibility, but there are various context where responsibility has different sources.

Responsibility, its grounds III

It is perfectly consistent to say that the user is responsible for damages caused by its agent, and for contracts made by its agent, and that the agent is not responsible, though:

- the user cannot know that the damage is being caused or the contract is being entered, and
- for assessing whether there has been intention or negligence, we have to look at the agent.

The foundation of responsibility

The reason why the user is responsible for the activity of an autonomous agent

- It is not foreseeability
- It is one's delegation of a certain activity to the cognition of an autonomous agent (cognitive delegation)

SAs in contracts

If we accept the idea of cognitive delegation then:

- One person will have the power to elect a SA as his substitute in making contracts
- The contract made by the SA will be valid even when no person had the intention of making it
- The cognitive states of the SA (and those attributed to it) will impact on the validity of such contracts

The relevance of SA's cognitive states I

- A user may be liable since the agent deliberately or negligently caused a damage
- A user may be bound by a contract which
 - the agent intended to make (in the name of the user), or
 - the other party justifiedly believed that the agent intended to make

The relevance of SA's cognitive states II

- A contract may be voidable when
 - the agent makes a mistake (which is knowable to the other party);
 - the agent is deceived by the other party.
- A sale may be invalid if the buying agent knew that the sold object did not belong to the seller

Agents and representation

SA's are not representatives (“agents”). However if their cognitive states count, there is an analogy:
Representation = Delegation of an act to the cognition of the agent.

- defects in cognition of the SA, when caused by, or known to, the other party should make the contract invalid
- the contract should be finalised when the information reaches the SA

Cognitive states in contracts

Agent *alpha* is operating an antique e-shop

- From a database, it gets the information that item 25 is a silver ring
- The agent offers to sell it for the price of euro 25
- A user buys it, knowing that it is made of gold

Is there any mistake? Is the mistake relevant? YES

Cognitive states in torts

Two SAs, α and β , α is used by A , and β is used by B .

- They send the same message to system γ “price offered euro 75”
- system γ crashes
- α sent the message to make γ crash
- β sent the message to make a purchase

Does this make any difference? YES

Main legal issues

- Contracts (mandate, representation, liability, enforcement, e-signature)
- Torts
- Privacy
- Intellectual property
- Trust (reliance)
- Legal personality
- Freedom of information
- Criminal law aspects

Agents and legal personality I

What does it mean to have legal personality:

- it does not mean to be able of producing (intentional) legal results
- it means to have one's own rights and duties, and in particular
- it means that one will have to repay one's debts with one's assets

Having a personality entails having a patrimony of one's own.

Agents and legal personality II

- Probably we should NOT grant agents legal personality, since this would lead to abuses and produce useless complications
- However, THIS exclusion is consistent with assuming that the initiative (and possibly the intention) of agents may be legally relevant.