

SOCIETY, LAW AND AGENTS

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INTRODUCTION

- Computers have become part of our everyday life
- Computers do change the way the legal work is done and
- Computers offered benefits are not so obvious
- This does not stop computers geeks pushing on
- Some efforts seems to affect at least the very essence of *legisprudence* if not more



WHAT IS LAW?

- *Law, in its generic sense is a body of rules of action or conduct prescribed by controlling authority and having binding legal force.*
- *Legislation is the act of giving or enacting laws; preparation and enactment of laws, the making of laws via legislation in contrast to court-made laws.*
- *A regulation is a rule of order prescribed by a superior or competent authority relating to action of those under its control.*

Henry Campbell Black. Black's law dictionary: denitions of the termsand phrases of American and English jurisprudence, ancient and modern. West Pub. Co, St. Paul, Minn, 6th ed edition, 1990.



ANALYZING THE LEGISLATION

- Legislation is
 - well grounded and
 - well established,
 - designed to its perfectness during long period of time
- thousands of humankind best minds
- over the several millenniums
- have dedicated their efforts
- to make the legal system better.



STEPS OF DEVELOPMENT

- modern law is dated back to 3000 BC, when ancient Egyptian law was formed as a civil code
- Hammurabi (1792–1750 BC) developed the first written code of law “The code of Hammurabi“.
- ancient Greeks introduced the principle of citizenship
- Romans started to divide legal sources into two groups:
 - unwritten law (*ius non scriptum*) and
 - written law (*ius scriptum*)
- ... and so forth



ANALYZING THE LAW FROM ICT POINT OF VIEW

- The legal system improved randomly over time and without central master plan
- it has many weaknesses which makes the system hardly usable
- There is no logic, intuitive way of presenting regulations
- it needs quite some years of special training to understand it and be able to properly use it



SOME REASONS FOR BAD USABILITY

- non-systematic organization of the legal order that arises from normative overproduction;
- fragmentation and overlapping of the modifications;
- emerging new soft law sources: -authority acts, new institutional bodies, etc.;
- unclean law-making and legal drafting processes, misleading about the range of competences assigned to national and regional bodies;
- different legal sources belonging to different publishers, in different formats and with different methods for identification and referring to parts of the collections;
- many different electronic formats available in the web



APPLICABILITY OF LAW

- Law is foremost about society and for society
- Important distinction to take into consideration:
 - *Ignoratio juris non excusat* - ignorance of the law excuses no-one.
- Very often this is too complicated task for non-lawyers to
 - find relevant legal source
 - properly understand it
 - implementat it
- This is management problem we are born with and learned to live together



REGULATION AS A MANAGEMENT TOOL

- Initiative to regulate starts usually from political will,
 - which is turned into legally acceptable form
 - processed through the governmental hierarchy up to parliament level,
 - where it is carefully studied prior accepting it
- OECD: Unfortunately regulatory policies have until now been far too often recommended without serious evaluation to support them

Cary Coglianese. *Measuring regulatory performance. EVALUATING THE IMPACT OF REGULATION AND REGULATORY POLICY*, OECD. Technical Report Expert Paper No. 1, August 2012.



APPROACHED TO OVERCOME SHORTCOMINGS OF LEGISLATION

- United States initiated Regulatory Impact Analysis (Nixon, 1969-1974)
 - contained following phases:
 - problem definition, identification of alternative regulatory options, data collection, assessment of alternative options and so forth
- This had an annual effect on the economy of 100 million USD or more

Andrea Renda. *Law and economics in the RIA world: improving the use of economic analysis in public policy and legislation.* Number 6 in *European studies in law and economics.* Intersentia, Cambridge, U.K. ; Portland, OR, 2011.



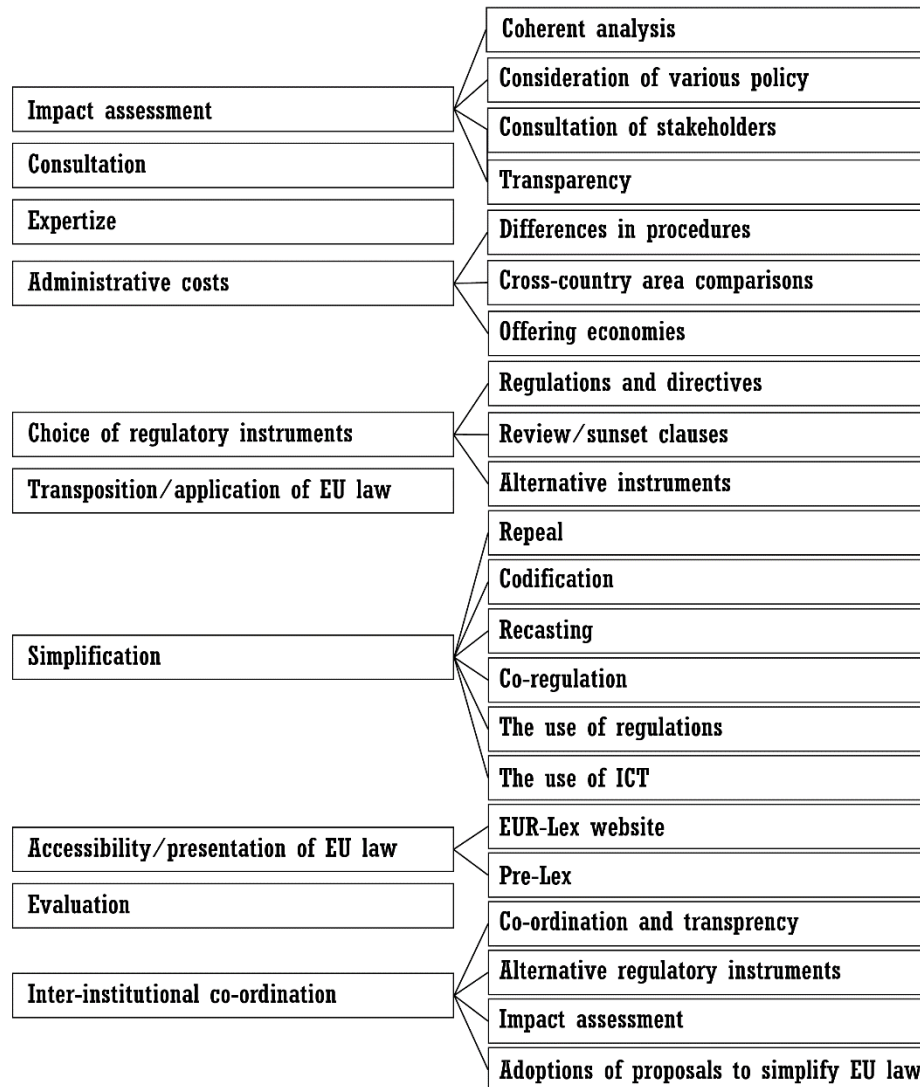
APPROACHED TO OVERCOME SHORTCOMINGS OF LEGISLATION

○ The EU

- launched its relevant Business Impact Assessment (BIA) System in 1986.
 - The initiative tried to measure the regulatory impact toward businesses but not toward social welfare as a whole.
- SLIM project (Simplification of the Legislation on the Internal Market) in 1996;
- BEST (Business Environment Simplification Task Force), in 1997;
- European Business Test Panel (EBTB) in 1998.
- Still the success of these targeted activities was limited and therefore, a EU initiative “Better regulation” started at 2001.



DIFFERENT EC ACTIVITIES WITHIN INITIATIVE “BETTER REGULATION”



REASONS FOR AUTOMATION

- *“Automation- the process of having a machine or machines accomplish tasks hitherto performed wholly or partly by humans...”*
- In the modern world, a machine refers also to electromechanical equipment such as a robot or computer.
- Automation major achievement
 - savings in labor, energy and materials
 - together with improved quality, accuracy and precision.



MAIN INITIATORS OF CHANGE IN LAW

- Change of the society
 - Marriage, globalisation, web-marketing
- Change of technology
 - Space technology
 - Telecommunication, space harvesting
 - Info-revolution
 - Computerisation
 - Internet



CHANGES INITIATED BY ICT

- *Technologies, networks and digital and social media are changing the way people think, behave, apprehend neighboring objects and their environment in general, interact and socialize as persons, citizens, workers and consumers*
- ICT related search focuses mainly on
 - how to automatically identify structural portions of legal documents through their mutual references;
 - and how to grasp semantic information of the legal text.



ICT CHANGING APPEARANCE OF THE LAW

- Digital revolution is introducing new ways how to deal with loosely structured information (legislation)
- XML is designed to structure, transport and store data and has a limited ability to add some meaning to text.

<definition>

<acronym>XML</acronym>

<extension>Extensible Markup Language</extension>

</definition>



CHANGES INITIATED WITHIN SOCIETY

- ICT are the infrastructure of globalization
 - to enable economic and social networks transcending borders;
- ICT are the engine of economic and social development
 - to increase the speed of change;
- ICT is the enzyme of complexity
 - by increasing knowledge and possibilities available to individual actors they increase the complexity of their interaction.



CHANGES INITIATED BY ICT WITHIN LAW

- ICT can provide an infrastructure for legislative networks
 - in order to enable legislative coordination to address global issues;
- ICT can support dynamic drafting
 - ICT enable to control the mass of legislative material, and to intervene upon it making the required changes;
- ICT can help legislators in modelling laws according to social complexities.



LEGAL INFORMATICS

- Means-ends rationality
 - to align legislation to its intended purposes by providing legislators with tools for anticipating the impact of new laws on the legal system, on administration, and on society or for monitoring and evaluating impacts of an existing law.
- Discursive rationality
 - to promote critical debate around legislation, by providing communication tools for promoting the informed debate within parliaments and outside of them, by facilitating the preparation of legislative proposals, and by offering citizens and their associations new ways to participate in the legislative process.
- Responsiveness to citizens' need and preference
 - to facilitate the contact between citizens and their representatives, providing citizens with new ways to express their views and with feedback about the choices of their representatives.
- Legal certainty
 - to enable citizens to anticipate legislation's impact on them, by providing access to laws and cases, by facilitating the drafting of more understandable regulations and the maintenance of the legal systems understandability as much as possible.
- Citizens' rights
 - to contribute to ensure that laws protect citizens' rights by making more accessible knowledge about rules and remedies and by ensuring publicity of information about officers' behavior.



EMERGENCE OF SOFTWARE AGENTS

○ Software agents features

- *Autonomy*: agents should be able to solve problems without direct intervention of humans or other agents;
- *Social ability*: agents should be able to communicate between each other and human agents in order to achieve goals;
- *Responsiveness*: agents should somehow sense the surrounding environment and respond to its changes;
- *Proactiveness*: agents should be able to take the initiative in response to favoring societal changes;



CONCEPT INTERNET OF THINGS

- *„If we had computers that knew everything there was to know about things—using data they gathered without any help from us—we would be able to track and count everything, and greatly reduce waste, loss*
- Therefore computers should be able to
 - see, hear and smell the world for themselves
 - enable computers to observe, identify and understand the world—without the limitations of human-entered data.

Kevin Ashton. That 'internet of things' thing - RFID journal. Available online at <http://www.rfidjournal.com/articles/view?4986>.



SYMBIOSIS OF HUMAN AND ARTIFICIAL SOCIETY

- Rolls Royce is planning to build unmanned vessels.
 - http://www.rolls-royce.com/marine/customer_focus
- Amazon has introduced a Prime Air concept.
 - <http://www.amazon.com/b?node=8037720011>
- Google is testing its self-driving cars on streets
 - [http://www.nytimes.com/imagepages/2010/10/10/science/10googleGrfxA.html?ref=science','687_643','width=687,height=643,location=no,scrollbars=yes,toolbars=no,resizable=yes'](http://www.nytimes.com/imagepages/2010/10/10/science/10googleGrfxA.html?ref=science','687_643','width=687,height=643,location=no,scrollbars=yes,toolbars=no,resizable=yes)
- USA is widely using military drones in public airspace
 - <https://www.youtube.com/watch?v=dyfjCgTUpq0>



FAA MODERNIZATION AND REFORM ACT OF 2012

○ Definitions

- **UNMANNED AIRCRAFT** - means an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft.
- **UNMANNED AIRCRAFT SYSTEM** - means an unmanned aircraft and associated elements (including communication links and the components that control the unmanned aircraft) that are required for the pilot in command to operate safely and efficiently in the national airspace system.

○ Prescribed plan for the rulemaking

- define the acceptable standards for operation and certification of civil unmanned aircraft systems;
- ensure that any civil unmanned aircraft system includes a sense and avoid capability; and
- establish standards and requirements for the operator and pilot of a civil unmanned aircraft system, including standards and requirements for registration and licensing



CONCLUSION

- How to manage unlimited number of agents?
- How to manage such half-human, half-technological society?
- Can law preserve it's original format we are so used to?
- Agents- initiating problems or initiating future?

