

Legal challenges for next generation science

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The Dilemma

- * Big data as the top out of 100 radical future technologies
- * Is already widely used in research in different fields; opens up completely new areas of research and presents new opportunities for research in many fields, e.g. biomedical research, climate research etc.
- * Development poses new challenges to legal regulation, in particular to fundamental rights of the citizens

- * How to adapt our legal system in a way that it would support the development of new technologies without causing undue prejudice to the fundamental rights of citizens
- * If the change in the technological production infrastructure requires a fundamental rethinking and restructuring of the concept of work in the society, maybe the same is true also for the legal regulation since copyrights protect the results of creative work

Open data

- * Opening up public data for free reutilization is one of the top priorities of the current Finnish Government
- * This is relatively easy for meteorological data, for maps and other data which does not involve personal data
- * Difficulties are also encountered with opening up the collections of our memory institutions, i.e. Libraries, museums and archives whose collections contain copyrighted works
- * Governed in the EU by the PSI Directive

Open data in research

- * Open access to research results
- * Open access to underlying data
- * Possibility to cross-reference and cross-link btw journal and data repositories, preferably at the global level
- * Opening up the repositories for extensive data analytics and text mining algorithms
- * Combining new research data to data existing in public registries and in the public sector organizations at large => Big Data

And the Law?

- * Safeguarding the right to privacy and data protection in the age of big data
- * Role of copyright in open science and data and text mining

Scientific knowledge as a (global) public good

- * knowledge is not being diminished by its use and is not rival;
- * Knowledge builds upon and expands the knowledge base of the society; cumulative nature of scientific knowledge
- * digital technologies make it possible to disseminate and have access to knowledge at a global scale in an unprecedented manner
- * access to research results and to the underlying data act as a verification system in scientific research and as a way of disseminating data to a widest possible extent

IPR's and scientific knowledge

- * IPR's subject scientific knowledge under private property rights and strip knowledge off its public good character
- * From a societal point of view a monopoly protection causes a deadweight loss to the society
- * Justification of IPR's as an incentive mechanism for innovations does not play a central role in academic research

Incentives for academic research

- * Academic reputation and prizes
- * Public funding
- * Copyrights: right of attribution
- * IPR's, in this case copyrights, are geared for the main stream commercial market
- * How to find the optimal balance btw. societal interersts and the incentive function for IPR's
- * The specific nature of knowlege production in different sectors have to be taken into consideration

Can information in the data be subject to ownership: copyright in the new open science environment

- * Copyright protects the form; not the content: ideas and facts are precluded from protection
- * Certain requisite of creativity; protected works have to be the expression of their author's own intellectual creation
- * Idea/expression dichotomy should in principle keep scientific knowledge free

Locking ideas in databases

- * Strong database rights subject also uncopyrighted data to copyright in practice
- * In the Nordic countries the catalogue rule covers remaining compilations of data
- * Database rights not subject to same restrictions as actual copyrights
- * No private copying, no quotation, no exception for incidental copies
- * In the Nordic countries also no research exception for using any kind of copyrighted materials for research purposes

Current challenges

- * Data and text mining
- * Publishers do not generally permit dtm in their standard contracts
- * Importance of university repositories; can they be opened up for dtm?
- * Green open access precludes the rights of publishers and can thus more easily accommodate new uses

Re-thinking the basis for copyright exceptions

- * Rights based exceptions quickly becoming obsolete in the current technological environment; leads to over protection,
- * no longer technologically neutral; e.g. protection of technological protection measures; (non) exhaustion of rights in the digital environment
- * We need exceptions that do not "directly trade on the underlying creative and expressive purpose" of works";

How to back-up knowledge creation through copyright

- * Enabling non-consumptive uses through copyright exceptions; e.g. data and text mining
- * Making the most out of the new possibilities of re-using and combining existing knowledge; enhancing the cumulative nature of scientific knowledge
- * First step in the Nordic countries would be to introduce an exception for backing-up research uses of copyrighted works
- * Could also be in a form of a flexible norm conferring legal security in areas not covered by existing exceptions; compare fair use in the US

Privacy and data protection in open science

- * Traditionally privacy safeguards the private sphere of individuals against outside intruders; opacity (Art. 7 of the European Charter of Fundamental Rights)
- * Data protection confers individuals the right to informational self-determination; transparent processing of personal data (Article 8 of the EU Charter)

Current data protection law

- * Processing of personal data in scientific research governed by data protection; exemptions to the requirement of consent and destruction of data when used for research purposes which are important for public interest
- * EU General Data Protection Regulation, possibly accepted in spring 2014
- * Directly applicable law in all member states and e.g. Norway, Iceland and Switzerland after having entered into force

Challenges for data protection

- * The regulation rests to a large extent on a wide definition of personal data defined as any information relating to an identified or identifiable natural person; an identifiable person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, unique identifier, or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social or gender identity of that person"

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- * Processing of personal data must reside on the consent of the data subject or it has to have statutory basis
- * Processing of anonymous data is outside the current and future EU data protection law
- * Processing of pseudonymous data is subject to data protection; defining pseudonymous data one of the key issues in the new Regulation

Are open data and data protection irreconcilable?

- * Impossibility of anonymisation of personal data
- * According to the best available techniques
- * Data subjects should be made aware of the possibility of identification
- * More weight on the notion of consent
- * New, dynamic forms of consent;
- * Data subject can administer the consent with an interactive program on a personal computer

Fundamental rights perspective

- * Balancing the different fundamental rights with each other;
- * right to privacy and data protection vs. freedom of science and e.g. Public health
- * The arts and scientific research shall be free of constraint. Academic freedom shall be respected vs. intellectual property shall be protected
- * Enhancing open science and embracing the new forms of knowledge production while respecting the fundamental rights of citizens
- * Requires re-thinking of the role of law in knowledge production

* THANK YOU!

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