Legal issues in open research selected topics: IPRs

Intellectual Property Institute

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Agenda for today

- Open research - open science
- Building blocks of OS (Open Science)
- Advantages and disadvantaged of OS
- Legal issues - IPR (Intellectual Property Rights)
  - patents, trademarks, trade secrets, copyright, sui generis database right
    - Copyright
      - open licenses
      - exceptions in limitations to copyright
        - EU copyright reform and current changes in the Slovenian law in the field of research (TDM and general exception for research)
    - Legal issues

Open science – Open research

- **Open science - movement** is the movement to make scientific research (including publications, data, physical samples, and software) and its dissemination accessible to all levels of society, amateur or professional.
- Open science is transparent and accessible knowledge that is shared and developed through collaborative networks.
- Usage of the term varies substantially across disciplines, with a notable prevalence in the STEM disciplines.
- **Open research** is often used quasi-synonymously to address the gap that the denotation "science" might have regarding an inclusion of the Arts, Humanities and Social Sciences.
- EU Commission uses/promotes term Open science.

Open science

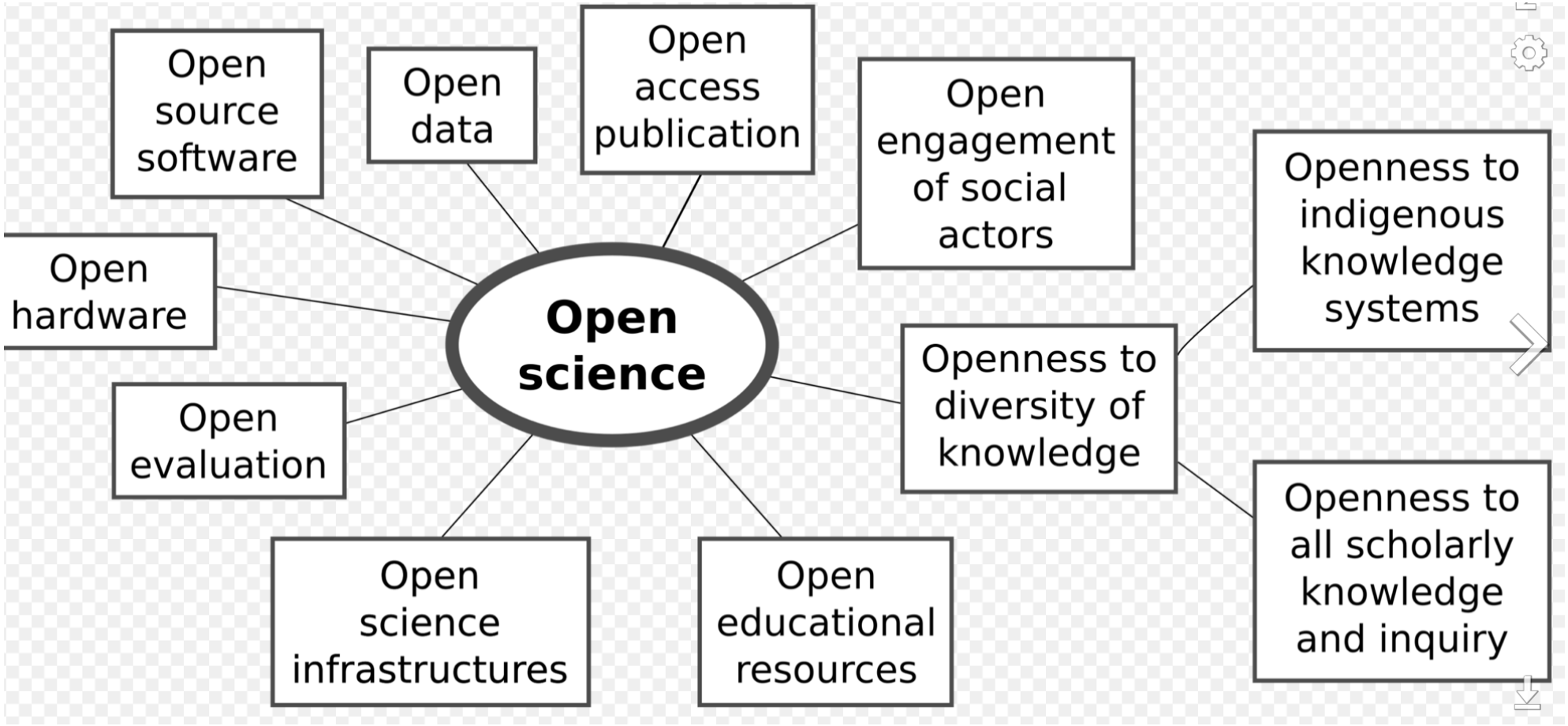
The primary focus is connecting all disciplines is the widespread uptake of new technologies and tools, and the underlying ecology of the production, dissemination and reception of knowledge from a research-based point-of-view.

Open science – Building blocks

(as discussed and challenged by the EU Commission)

- the future of scholarly communication,
- findable, accessible, interoperable and reusable (FAIR) data,
- the European Open Science Cloud,
- next-generation metrics,
- new ways of evaluation, rewards and incentives,
- skills in open science (open education),
- citizen science
- research integrity and collectively agreed code of ethics

Open Science – UNESCO



Open science elements based on UNESCO presentation of 17 February 2021. This depiction includes indigenous science, https://en.wikipedia.org/wiki/Open_science

Open Science - Advantages

- Open access publication of research reports and data allows for rigorous peer-review
- Publicly funded science will be publicly available
- Open science will make science more reproducible and transparent (prevent manipulation of data)
- Open science has more impact
- Open science will help answer uniquely complex questions

Open Science - Disadvantages

- Arguments against open science tend to focus on the advantages of data ownership and concerns about the misuse of data.[78][79]
- Potential misuse
- The public may misunderstand science data
- Low-quality science
- Entrapment by platform capitalism

The conflict that led to the Open Science movement is between the desire of scientists to have access to shared resources versus the desire of individual entities to profit when other entities partake of their resources.

David, Paul A. (March 2004). "Can "Open Science" be Protected from the Evolving Regime of IPR Protections?". *Journal of Institutional and Theoretical Economics*.

Open science (OS) is considered the new paradigm for science and knowledge dissemination. OS fosters cooperative work and new ways of distributing knowledge by promoting effective data sharing (as early and broadly as possible) and a dynamic exchange of research outcomes, not only publications.

On the other hand, intellectual property (IP) legislation seeks to balance the moral and economic rights of creators and inventors with the wider interests and needs of society.

Open Science and Intellectual Property Rights How can they better interact? State of the art and reflections Report of Study, Javier de la Cueva and Eva Méndez, EU Commision,

Economics and Intellectual Property Rights (IPRs)

Is innovation and creation possible without IPR?

The problem isn't that we don't have enough evidence, or the right kind of evidence. The problem is that the picture painted by the evidence is a complicated one. The relationship between patents and innovation seems to depend greatly on industry; some evidence suggests that the patent system is worth the cost in biomedical industries but not elsewhere. Copyright industries seem to vary widely in how well they are responding to the challenge of the Internet, and their profitability doesn't seem obviously related to the ease or frequency of piracy. The studies of the behavior of artists and inventors are similarly complicated. Money doesn't seem to be the prime motivator for most creators, and sometimes it can even suppress creativity. […] The decidedly ambiguous nature of this evidence should trouble us as IP lawyers, scholars, and policymakers.

Intellectual Property Rights (IPRs)

IPRs elevant for OS

- Patents
- Trademarks
- Trade secrets
- Copyright

- There are other IPRs.

COPYRIGHT

- Aim of copyright: to give incentive to create,to reward authors and stimulate dissemination of knowledge. It is not only about TRADE – it is about creation and dessemination of knowledge
- Huge challenges: digitalization and global communication networks urge for rebalancing of legislation
- Copyrights management - one of the challenges -

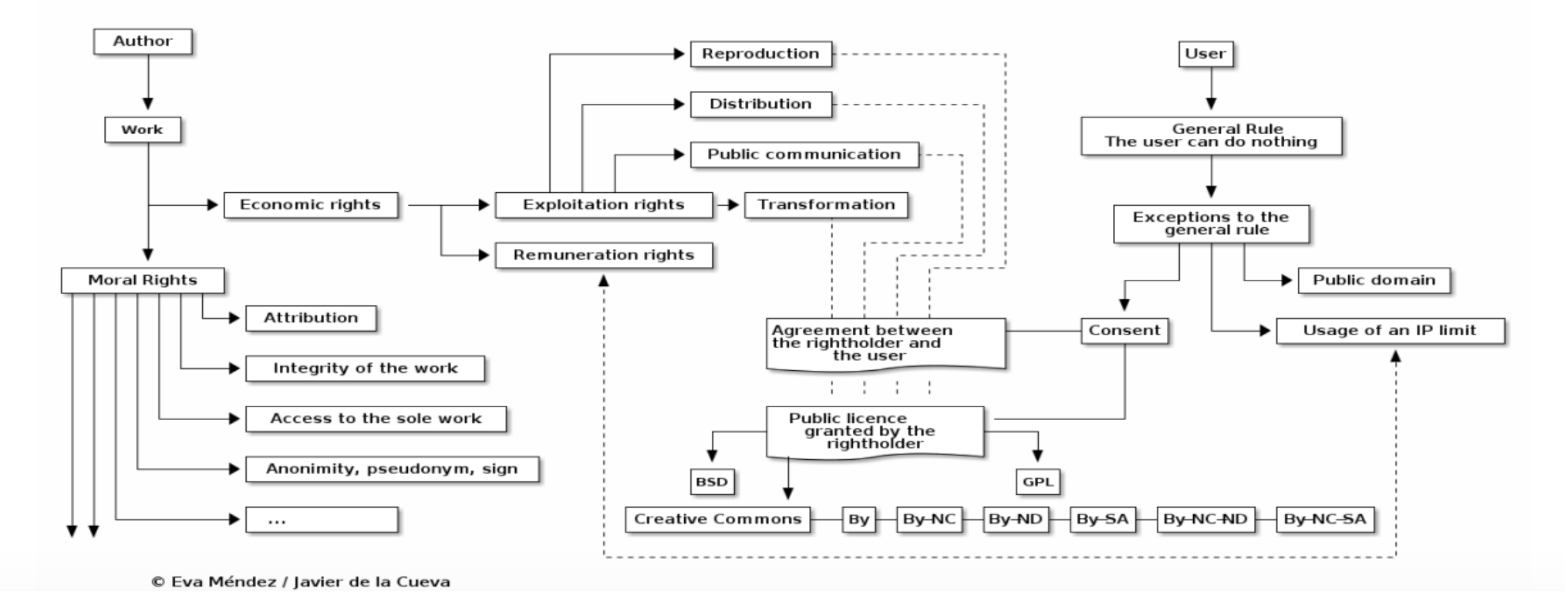
What is CR?

set of exclusive material and moral rights

Why we have CR?

incentive, reward for creators, social value

COPYRIGHT BASICS



COPYRIGHT IN THE DIGITAL ERA

"Copyright is constantly in war with new technologies."

MAIN CHALLANGES

CR today is to rigid and to inflexible

CR creates barriers to legal use and innovation and not incentives

Enforcement is too excessive

DRMs do not work

Territorial limitations still exist

Innovation is hindered in the fragmented market

CC LICENCES

- THE THREE LAYERS OF CC LICENSES
- THE FOUR CC LICENSE ELEMENTS
- THE SIX CC LICENSES
- CC LICENSES AND PUBLIC DOMAIN – CC 0
- CC LICENSES AND COPYRIGHT EXCEPTIONS AND LIMITATIONS

THE THREE LAYERS OF CC LICENSES

CC licenses incorporate the so-called „three-layered“ desing, so that they can be read by legal experts, non-lawyers, and machines:

1. Legal code layer – language and text formats understandable by lawyers
2. Common deed layer – not a license itself; understandable also by non-lawyers, user-friendly
3. Machine readable layer - summary of key provisions in a format understandable by software

THE FOUR CC LICENSE ELEMENTS

CC licenses include different combinations of 4 fundamental elements, allowing for different types of uses of works:

1. BY – credit must be given to the author
2. SA – adaptations of the work can only be shared under the same terms
3. NC – only non-commercial uses of the work are permitted
4. ND – no derivatives or adaptations of the work are permitted

THE FOUR CC LICENSE ELEMENTS – NC

NC (non-commercial) element explained:

- Uses not primarily intended towards commercial advantage (no activity is completely severed from commercial activities) – intentionally flexible definition
- NC relates to purpose of use of work, not to user's identity!
- Reuses are also limited to non-commercial uses!
- Explanation of NC licenses do not modify them!
- NC licenses are non-exclusive!

THE SIX CC LICENSES

There are six different CC licenses, each one allowing for a different level of exploitation of the works:

1. CC BY: allows any use of the work, including commercial use, as long as proper attribution is given to the author.
2. CC BY-SA: allows any use of the work, including commercial use, attribution must be given, any adaptations must be licensed under identical terms
3. CC BY-NC: allows any use of the work for non-commercial purposes, proper attribution must be given to the author

THE SIX CC LICENSES

4. CC BY-NC-SA: allows any use of the work for non-commercial purposes, proper attribution must be given to the author, any adaptations must be licensed under identical terms
5. CC BY-ND: allows any reproduction and distribution of works, including for commercial purposes, but does not allow their adaptation, proper attribution must be given to the author
6. CC BY-NC-ND: allows any reproduction and distribution of works for non-commercial purposes only, does not allow their adaptation, proper attribution must be given to the author

CC LICENSES AND PUBLIC DOMAIN – CC0

CC 0 (CC zero) is a tool which allows authors to renounce their copyright and put their works in the public domain to be used by anyone for free.

Difference from CC BY: works published under CC 0 are no longer copyright protected – no copyright exists in those works.

CC LICENSES AND CR EXCEPTIONS AND LIMITATIONS

While CC licences (and sharing under CC 0) are non-revocable, they do not affect or limit any freedoms granted by law – exceptions and limitations to copyright cannot be overridden or encumbered by CC licences!

EU Copyright Reform

- EU CR reform package introduced in September 2019 (4 instruments)
- Most important part: Directive 2019/790, of 19 April 2019, on copyright and related rights in the Digital Single Market (DSM Directive)
- DSM needed to be implemented by Member States (MS) until June 7 2021
- 19.5.2022 Commission sent reasoned opinions to 13 MS

Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonization of certain aspects of copyright and related rights in the information society (InfoSoc Directive)

Directive 2012/28/EU of the European Parliament and of the Council of 25 October 2012 on certain permitted uses of orphan works (Orphan works Directive)

BIG DATA, DATA ANALYTICS, AI

- Big Data is important for the Artificial Intelligence (AI)
- European based data analytics is estimated to grow to $10.3 billion by 2021
- Text and Data Mining (TDM) *“any automated analytical technique aimed at analysing text and data in digital form in order to generate information which includes but is not limited to patterns, trends and correlations.”*

TDM AND LEGAL UNCERTAINTY

Only some EU member states have TDM exceptions.

In others there is no legal certainty for researchers and/or others involved in data analytics.

This fragments data analytics and hinders research, innovation, economic growth and competitiveness of the EU.

EU COPYRIGHT REFORM – TWO NEW TDM EXCEPTIONS IN THE DSM DIRECTIVE

Article 3

- mandatory exception
- freedom to mine for researchers in EDU/CHI inst
- for research purposes
- protected from contracts or TPMs
- Nothing about sharing results
- Commercial TDM allowed
- No harm – no renumeration
- No time limit for storage
- No contractual overrides
- TDM – should not undermine the effective application of the exception

Article 4

- mandatory exception or limitation
- gives freedom to mine to everyone
- for any purposes
- except when rightholders expressly prohibit
- Nothing about sharing results
- Commercial TDM allowed
- Renumeration – probably not
- “As long as necessary for the TDM purposes”
- Rightholders can expressly reserve the TDM use

SHORTCOMINGS – OF THE EU TDM EXCEPTIONS

- Technical protection measures (TPMs)
- Special measures requiring secure storage
- Recitals discussing depositing data with trusted intermediaries
- Limitation of data retention
- Problem if Robot Exclusion Standard would not be agreed upon for open web
- Remuneration
- Is TDM good definition for AI?

IMPROVEMENTS: ARTICLE 3

- demanding maximum of 72 hours when TPMs are preventing data mining.
- rejection of any specific measures regarding secure storage.
- opposition of any requirement to deposit data with a trusted intermediary.
- specific inclusion of Software
- provision for remote access in national law when data mining relates to digitised analogue items. e.g newspapers etc.
- a clear exception for sharing the results of data mining.
- protection of all copyright exceptions from override by contracts.

IMPROVEMENTS: ARTICLE 4

- demanding maximum 72 hour response time in law where access is being blocked. Compensation regime when it goes beyond this.
- rejection of any specific limitations on being able to retain data.
- rejection any calls for the exception to be subject to remuneration.
- Robot Exclusion Standard should be used to disallow data mining on websites accessible on the open web.
- providing for remote access in national law when data mining digitised analogue items.
- introduction of a clear exception for sharing the results of data mining.
- clear language in contracts when rightsholders wish to reserve rights in materials not available on the open web.

COPYRIGHT REFORM - SLOVENIA

- Proposed legislation in the parliament
- Scientific and research community active in the process but not very successful so far.
  - TDM exception – proposal to implement exception for researchers with necessary improvements
  - General research exception for scientific research

Global harmonization of L&Es to copyright

We need global and harmonized solutions in the form of exceptions and limitations

Currently at WIPO (42 SCCR)

- African proposal: limitations and exceptions to copyright (L&Es) for libraries, archives, educational institutions, research institutions, and persons with other disabilities.
- TERA 2018 (Treaty on copyright for education and research): addresses the legal gaps of cross-border collaboration and exchange (prepared by civil society)

LEGAL ISSUES AND DATA

Ownership of data

Data and facts fo not have protection under copyright.

Sui generis data base right: ‘database’ in its Article 1(2) as ‘a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means’ and determines that ‘databases which, by reason of the selection or arrangement of their contents, constitute the author’s own intellectual creation shall be protected as such by copyright. No other criteria shall be applied to determine their eligibility for that protection’ (Article 3(1).

LEGAL ISSUES AND DATA

Legal issues for data – in

Legal issues for data inside

Legal issues for data out

Thank you!

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