

## OPEN SCIENCE AND IP: THE DILEMMA

GLOBAL DIGITAL ENCOUNTER 22  
THURSDAY, NOVEMBER 10TH, 2022

### Panelists:

- **Prof. Richard GOLD**, James McGill Professor of Intellectual Property and Innovation Law (Moderator)
- **Prof. Roberto CASO**, Professor of Law, President of the Italian Association for Open Science
- **Prof. Julien CABAY**, Professor of Law at Université Libre de Bruxelles (ULB)

### OBJECTIVES

Before, during, and further to the COVID Crisis, Open Science steadily developed, and its role is become even more central for the Research World, for Business World and for Citizens and Society in general. Its development and use are connected to major advancements of creativity in many sectors, and this brings legal consequences, for Classical IP, and offers real challenges in particular to the Patent System and to Copyright and Neighboring Rights Law. New models are being developed and are in urgent need for clarity on the interaction of Open Science with classical IP. Which meanings might be expected from this evolution / revolution? Speakers from Europe and North America will provide a worldwide picture of the future of "Open Science: the dilemma", including on re-imagining IP in this area in favor of both fair business and consumers/society.

## REPORT

### INTRODUCTION

**Prof. Laurent MANDERIEUX** opened the 22<sup>nd</sup> Encounter by emphasizing the fundamental questions that it will address: is open science a new way that can blossom? Is IP interacting positively or negatively with it? Is it a model that is largely developed? What are the hurdles and limits? How can we make knowledge and new knowledge circulating data in a safer way?. Open science has developed steadily and soon has become central in the research world, for business and for citizens. This is why - he acknowledged - new models have been developed and, in this context, it is important to urge to have more clarity about the relationships between open science and IP. He then welcomed and presented the speakers and the moderator.

**Prof. Javier FERNANDEZ-LASQUETTY** welcomed and thanked the panel, emphasizing the importance of open science for society and researchers.



## DISCUSSION

**Prof. GOLD**, acting as a moderator and speaker, challenged the speakers with the following questions:

### 1. ARE IP SYSTEMS AND OPEN SCIENCE INCOMPATIBLE?

**Prof. CASO** maintained that IP and OS are not incompatible in absolute, but open science is not compatible with an expanding regime of more exclusive rights. He mentioned that the sui generis database right showcases this. Expanding on his view, he recalled that database right in Europe is the most impressive example of conflict between open science and IP. The aim of the database right was to foster the database industry in the EU. However, the effect was the opposite, with evidence showing that it fostered the database industry in other countries. He added that database right is hard to manage in the open science system and in the university or research institutions.

**Prof. CABAY** expressed doubts about whether these models are compatible or incompatible at all. He argued that compatibility/incompatibility rather depends on the way they are handled and managed. For example, he envisages "incompatibility" when considering territorial limitations: while IP is of territorial nature, science or open science depicts its worldwide nature. Thus, in practice, it is difficult that if a publication is made in open access in one country, that publication will be also accessible in other countries. Another incompatibility he acknowledged is the constant differentiation between "science" use and "commercial" use. Based on this, he questioned how will be made in practice the distinction between text and data mining for commercial and non-commercial use. He argued that in

such situations there is clear overlap and that any distinction necessitates data measurement and methods. Thus, it is uncertain if when making text and data mining for research, the limitations set for commercial use will not be faced. He concludes that at the current stage, data is not as open as possible and closed as necessary, but more on the contrary.

**Prof. GOLD** added that open science depends on IP. An example is the use of data exclusivity, which is completely compatible with sharing knowledge: the person who controls the data package (pharmaceutical knowledge) has control over it but can release it to the public so others can build upon it, without undermining the exclusivity. Thus, he agreed with the previous speakers that the compatibility between open science and IP depends on the IP regime and how it is exercised.

### 2. WHAT ARE THE INCENTIVES TO OPEN SCIENCE AND IP FOR DIFFERENT FIELDS?

**Prof. GOLD** recalled that the IP regime does not work in certain areas, such as antibiotics resistance, rare diseases, and pediatric diseases, because there is too much uncertainty in the market. Thus, he argued that we need alternative models, which are more collaborative and have a multi-stakeholder approach to innovation. Based on this, he proposed that in areas for which traditionally we have relied on IP we should consider open science as a way for commercial possibilities.



**Prof. CASO** stated that in order to investigate deeply the relationships between open science and IP it is necessary to take into account other incentives. For instance, the incentive of young and established researchers in terms of research evaluation. As regards incentives to other forms of cooperation and collaboration environments rather than competition, he mentioned that the current debate at the EU level is on the amendment to the research evaluation. This would take into account other metrics rather than publications, such as the cooperation among scientists to give society the results. The research environment should support this approach.

**Prof. CABAY** considered that other results rather than publications should be considered, such as interdisciplinarity or relying on international networks. The problem with the incentives of the current system is that any researcher has to start with the state of the art, but he/she might not have access to publications. This puts researchers of different geographical areas at different levels or opportunities.

**Prof. GOLD** added that young generations are more in favor of open science. He believes that brings opportunities, reputation, networks, and visibility.

### 3. WHAT ARE THE DISINCENTIVES: WHAT SHOULD NOT BE DONE?

**Prof. CASO** argued that the most relevant disincentive is the research assessment based on individuality and that the bibliometric is based on this idea. He added that the history of science teaches us that science is a cooperative endeavor, so if we teach researchers that they have to publish as a single author they have a greater ranking, this is the opposite of open

science. He added that the control of the infrastructure is another issue. The public sector should not let only the private sector or big tech control the science communication system.

He recalled Shavell's paradox and asserts that there is no rationale in the copyright transfer agreement to the publisher without monetary compensation<sup>1</sup>. If we want to defend our academic freedom, we must imagine a sort of secondary publication or communication right in order to achieve open access as authors.

**Prof. GOLD** asserted that in the publishing sector model the author must waive the copyright and will even pay for having the work disseminated to all people, without getting money, although the author will probably pay more without the copyright system. This is the opposite that we can find in the patent system, where payment is done for having an exclusive right subject to dissemination. In this case, not all is disseminated: for example, clinical trial that does not contribute to the patent. So, we created an atmosphere where we all collectively pay higher prices to access pieces of knowledge. Several companies investing in research and having negative results do not share them so all this investment is wasted because we have chosen a system based on secrecy with limited sharing.

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<sup>1</sup> Steven Shavell, *Should Copyright of Academic Works be Abolished?*, *Journal of Legal Analysis*, Volume 2, Issue 1, Spring 2010, Pages 301–358, [here](#).



Open science is not just bad publications but also the method and process in science, selection of projects, etc.

**4. HOW DOES THE INTERACTION BETWEEN IP AND SECRECY RIGHTS AND THE BUSINESS MODEL INTERFERE WITH THE PROCESS OF SCIENCE, BEYOND JUST ACADEMIC PUBLISHING? BEYOND THE OPEN PUBLICATION, WHERE ELSE THE OPEN SCIENCE BECOMES AN IMPORTANT TOOL TO ADVANCING THE PROCESS OF SCIENCE?**

**Prof. CABAY** shared that when performing data mining for research with engineers, the data set is based on data that cannot be shared although such data represent the state of the art. As a lawyer, he could negotiate some terms which allow him to do something that is not included in standard provisions. So, researchers must be trained in certain legal aspects in order to know their rights with the purpose of fostering open research.

**Prof CASO** agreed, stressing that some of the processes are in the hands of big companies, like Google, who have the power of processing data and control them. Consequently, we are losing control over some fundamental pieces of the scientific process. In particular, if we don't know the logic of AI applied to the scientific data from big companies, we are losing control over a fundamental pillar of our scientific process. Karen Maex expressed this concern about the control over data and scientific processes and proposed a Digital University Act, based on the idea of the control of data from the university system<sup>2</sup>.

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<sup>2</sup> Karen Maex: 'Protect independent and public knowledge.' Speech January 8th 2021. See also the study of the Panel for the Future of Science and Technology (STOA), of the European Parliament, *Governing data and artificial intelligence for all: Models for sustainable and just data governance*, 11/07/2022, [here](#).

**5. WHAT DO WE THINK ABOUT THE ROLE OF OPEN SCIENCE IN TERMS OF NATIONAL SECURITY?**

**Prof. CABAY** expressed his fear about opening the data to anyone for national security for the fact that they can be appropriated and there would be commodification of them. As we still are in an IP system, which entails exclusive rights, publishers will eventually be paid to publish those works. Publishers are in favor of open access because this business model benefits them.

**Prof. CASO** suggested that open science is a tool to build democracy and peace, exactly the opposite of a world divided by borders, walls, etc. For example, we use the expression "patent wars" for the vaccination anti-COVID-19 because it was a geopolitical problem.

**Prof. GOLD** added that open science is not a single act but an approach in which the expectation is that of mutual sharing in order to give access to the community.



## 6. WHICH PRIORITY WOULD YOU IDENTIFY AS FIRST STEP IN ORDER TO ALLEVIATE TENSIONS BETWEEN TRADITIONAL IP AND OPEN SCIENCE AS A TOOL SERVING SOCIETY?

**Prof. CASO** suggested reforming IP: the idea of expanding IP to data is contrary to the historical basis of IP. In particular, in copyright, the dichotomy idea-expression was conceived for this reason. **Prof. GOLD** cited the example of the US model of the 'fair use fair deal' clause and no data protection system, and **Prof. CABAY** would put statutory licensing to publication. The first step would be to have a discussion on a treaty at the international level because there are many jurisdictions introducing open science.

**Prof. GOLD** stressed that in open science we try and fail until we succeed. We must open the mindset that the IP system works in some situations but does not work in others. Policymakers have to set up a space and fund that space geared to supporting open science projects. Where one form of incentive - for example, IP - does not work, we prioritize other incentives, such as philanthropic or governmental funding.

## 7. HOW DO YOU THINK THE REWARD SYSTEM SHOULD BE STRUCTURED INSIDE OPEN SCIENCE PARADIGM, ESPECIALLY FOR EARLY CAREER RESEARCHERS? HOW TO CHANGE INCENTIVE STRUCTURE FOR YOUNG RESEARCHERS?

**Prof. CABAY** suggested measuring impact, but allowing impact to be assessed in multiple ways. **Prof. CASO** took into account teaching and mentoring activities. In Italy, it does not count in the assessment. This is completely wrong, as teaching is the first way to practice open science.

## CLOSING REMARKS

**Prof. Manuel DESANTES** closed the encounter emphasizing the wonderful discussion had opened the Pandora box of an extremely exciting topic. Nobody doubts that the exponential explosion of open science is going to change our lives but we are still far from identifying how many things are going to change in the IP world in the following years ... is this an academic dream or should we pursue the path to find a compromise where intellectual property enhances open science? And if this is the case, how to do it? Many questions could not be replied (for instance, a) Should open science take advantage of 35 years of open source software, 10 years of open data and open hardware, etc. (successes and challenges) to look at rewards, governance, IP management... and learn from them?, or b) Should we rethink the incentives normally used at the universities and research-based organizations to measure achievements in science? So, the main conclusion is that we have to devote many more Encounters to the complex relations between open science and intellectual property in the future.



Report written by Magalí CONTARDI  
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[Fide](#) and TIPSA (Transatlantic Intellectual Property Academy) join forces to organize a series of digital encounters to try and find out if Intellectual Property is equipped to face the ongoing changes that our world is experiencing.

All online encounters are opened to any interested person and speakers have been selected among the most relevant IP scholars and professionals all over the world.

The [Global Digital Encounters](#) form an integral part of the solidarity projects run by both organizations to support the international, European and national plans to overcome the sanitary and financial consequences of the COVID-19

