Rethinking digital copyright law for a culturally diverse, accessible, creative Europe

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Main Author(s):	Rossello, Giulia (SSSA); Martinelli, Arianna (SSSA); Ferri, Delia (NUIM); Katie Donnellan (NUIM);
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Abbreviation list

ACTA	Anti-Counterfeiting Trade Agreement
CDSM Directive	Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC (Text with EEA relevance.) (Directive on Copyright in the Digital Single Market)
CJEU	Court of Justice of the European Union
CRPD	United Nations Convention on the Rights of Persons with Disabilities
DPO	Disabled People Organization
D2.2 – 2.9	Deliverable 2.2 – 2.9
EBU	European Blind Union
EIFL	Electronic Information For Libraries
EU	European Union
GDPR	General Data Protection Regulation
IFLA	International Federation of Library Associations and Institutions
InfoSoc Directive	Directive (EU) 2001/29 of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society
IP	Intellectual Property
IPR	Intellectual Property Rights
LS	Life Sciences
Marrakesh Treaty	WIPO Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled
Marrakesh Directive	Directive (EU) 2017/1564 of the European Parliament and of the Council of 13 September 2017 on certain permitted uses of certain works and other subject matter protected by copyright and related rights for the benefit of persons who are blind, visually impaired or otherwise print-disabled and amending Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society
Marrakesh Regulation	Regulation (EU) 2017/1563 on the cross-border exchange between EU and non-EU countries of accessible format copies of certain works for the benefit of persons who are blind, visually impaired or otherwise print-disabled
M30	Month 30
NGO	Non-Governmental Organisation
NUIM	Maynooth University - National University of Ireland Maynooth
PE	Physical Sciences and Engineering
R.Q.1 - 7	Research Question 1- 7
SH	Social Sciences and Humanity
SSSA	Sant'Anna School of Advanced Studies Pisa, Italy
STT	Speech To Text
TTS	Text-To-Speech
TPMs	Technical Protection Measures

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VIP	Visually Impaired People
WAD	Directive (EU) 2016/2102 of the European Parliament and of the Council of 26 October 2016 on the accessibility of the websites and mobile applications of public sector bodies (Web Accessibility Directive)
WBU	World Blind Union
WIPO	World Intellectual Property Organisation
WP	Work Package

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Executive Summary

The *reCreating Europe* aims to promote a creative, diverse, and accessible Europe, and, to achieve this aim, investigates *inter alia* stakeholders' perspectives on the European regulatory framework of copyright law. Work Package (WP) 2, entitled *End users and access to culture,* examines how End-users' interact with copyright rules. In particular, Task 2.5 - *Empirical case studies on the effectiveness of regulatory measures to increase digital access to academics and people with visual impairments* - analyses the impact of regulatory responses to paradigmatic access issues focusing on two case studies: (i) academics and the research exception, and (ii) people with visual impairments and the so-called Marrakesh exception. The two empirical studies were independently carried out but an extensive communication and collaboration between the research teams allowed for comparability and a parallel discussion of the results. Moreover, we have drawn general conclusions on individuals with paradigmatic access issues.

Technological advances allow for an extensive diffusion of knowledge, and scholars can potentially access digitally almost all prior knowledge. However, despite the existence of various teaching and research exceptions, journal articles are covered by strong copyright protection and access to scientific articles remains very costly. The cost of journal articles and other scientific materials is a barrier that might affect scholars' ability to access knowledge. Recently, a consortia of EU universities had a dispute with a major scientific publisher raising the debate on the role of publishers in science and the perceived unfairness of their business models. In this context, scholars' perceptions of copyright law could be altered. Indeed, scholars might be prone to forms of digital piracy, such as Sci-Hub, to access scientific knowledge. Therefore, Sub-task T2.5.1 provides empirical evidence on academics' perceptions of copyright law and their preferred channels of access to scientific knowledge. This task relies on survey data collected across six European countries (Italy, Ireland, Sweden, Germany, Hungary, The Netherlands).

Similarly, access possibilities for people who are visually impaired can be enhanced by the advancement of digital technologies and by means of copyright exceptions. Indeed, the 'WIPO Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled' (Marrakesh Treaty)[1] (implemented into EU law by Directive 2017/1564 and Regulation 2017/1563) aims to improve access to published works in accessible formats for people with visual impairments, blind people and people that are otherwise print disabled, thanks to specific copyright exceptions. However, among these cohorts, persons with visual impairments and blind persons still face obstacles in accessing printed material. In that regard, Sub-task T2.5.2 provides empirical evidence on the channels of access to published material for persons with visual impairments, on their knowledge and perceptions of copyright law and the role of copyright exceptions in enhancing their access opportunities. The task collects and analyses survey data across six European Union (EU) Member States (Italy, Ireland, Sweden, Germany, Hungary, The Netherlands).

As of M30 of the project, the researchers involved in the two sub-tasks have completed the final report. This report builds upon the preparatory work of the interim report delivered in M18 and shows the results of the two case studies. The analysis on the case study on academics shows that they are strongly opinionated about journal copyright agreements and, in general, advocate for a short and soft protection, rather that the

[1] World Intellectual Property Organisation Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled, July 31, 2013. https://www.wipo.int/edocs/mdocs/copyright/en/vip_dc/vip_dc_8_rev.pdf accessed 17 June 2022.

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complete abolishment of copyright protection. Generally, scholars show a good general knowledge of copyright law, but they lack a specific knowledge. The analysis of the second case study on people with visual impairments shows that, generally, they have a limited knowledge of copyright law and of the Marrakesh Treaty. For blind people, the limited use of Braille and associated technologies (e.g. Braille printers) constitutes an additional barrier to further access improvements.

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1. Background and Aim

1.1 Introductory Remarks

This report stems from the research conducted within the *reCreating Europe* [2] WP2, which focuses on End-users and access to culture. The overall purpose of the project is to gain an understanding of which regulatory framework best supports culturally diverse production, as well as inclusive access and consumption. WP2, by focusing on End-users and access to culture, through a combination of desk-based research and participatory research methods, investigates the degree of users' knowledge and understanding of copyright law, and suggests alternative coping strategies adopted by individual users and communities to overcome regulatory obstacles to accessing digital cultural goods and services. Within the project, an 'End-user' is defined as a 'natural person, that is, an individual, easily distinguishable from institutional users such as broadcasters, content suppliers, libraries, archives, and so forth', and, broadly speaking 'a consumer of digital goods and services who benefits from consumer protection law when contracting with professional traders' (Mazziotti, 2008). The work plan of WP2 comprises a broad set of interdisciplinary research activities, producing nine deliverables, academic outputs, and recommendations on best practices and policy reform.

The key objective of WP2 is to understand the effectiveness of regulatory measures in relation to digital access for specific cohorts of End-user. In that regard, Task 2.5 focuses on two empirical case studies assessing the impact of regulatory responses to paradigmatic access issues: (i) academics and the research exception (T2.5.1), and (ii) people with visual impairments and the so-called 'Marrakesh VIP exception' (T2.5.2). The research is supported by two surveys conducted across six EU Member States (Italy, Ireland, Sweden, Germany, Hungary, and The Netherlands).

This final report (D2.8) builds on the previous interim report (D2.5) delivered in M18 and on deliverable D.2.1., which provided a comparative EU and cross-national mapping of regulatory sources, focusing on copyright and the digital single market. It complements other WP2 deliverables, which include: an interim report on barriers to access cultural content for vulnerable groups (D2.2), a final report and public dataset on copyright flexibilities (D.2.3), a final report on barriers experienced by vulnerable groups (D.2.4), a final report on case studies (D.2.8), a peer-reviewed publication on the impact of copyright law and perception on the demand for cultural goods and services (D.2.6), a report on the effect of digitization and regulatory changes on access to culture (D.2.7), and final policy recommendations (D.2.9).

1.2 Research Questions

This section recalls our research questions, upon which we built our two surveys, and builds on the more extensive discussion included in the previous interim report (D2.5).

1.2.1 Core Questions

The two empirical case studies of Task 2.5 examine how standardized regulatory responses to copyright law influence the perception and behaviour of specific cohorts of individuals that experience paradigmatic issues and challenges in accessing digital cultural products. On the one hand, the specific needs of those cohorts boost the emergence of new products and technologies. On the other hand, these cohorts also require

[2] For an overview of the project objectives and activities, please see <https://www.recreating.eu/> (last access 9 June 2022).

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tailored regulatory interventions to accommodate their needs. Against this background, Task 2.5 empirically investigates two groups for which copyright exceptions have been enacted. Our research is also based on the assumption that these groups, interested by copyright exceptions, might have a specific knowledge and perception of copyright law. It is also based on the assumption that specific access needs might solicit certain behaviours and impact the channels used to access copyrighted material.

With this in mind, the two parallel empirical case studies of Task 2.5 aim to answer three general research questions:

- Are individuals with paradigmatic access issues aware of copyright laws and exceptions that relate to them?
- To what extent and how do copyright exceptions affect the perception of the copyright law of individuals with paradigmatic access issues?
- Which are the preferred channels of access to digital cultural goods used by individuals with paradigmatic access issues? And why are those channels used?

To answer these three general questions, we analysed the results of two empirical case studies. The first case study examines academics, for whom the 'teaching and research exception' applies. The second case study focuses on people with visual impairments who fall within the scope *ratione personae* of the WIPO Marrakesh Treaty to Facilitate Access to Published Works for Persons who are Blind, Visually Impaired, or Otherwise Print Disabled (Marrakesh Treaty),[3] the so-called Marrakesh exception, and within the scope of the derived EU Directive and Regulation.[4] For this particular case study we adopted a broad understanding of visually impaired people including blind people. Vision impairment is here used as encompassing all levels of sight loss, including a moderate sight loss, severe sight loss and blindness. Accessible formats for blind or visually impaired persons generally require a 'format shifting of the original work' (Köklü , 2014), which may interfere with the exclusive reproduction right of the copyright holder. In other words, a process that converts a copy of the copyrighted work into an accessible format (including a digital format) encroaches on the exclusive right of copyright owners. Furthermore, cross-border circulation of accessible copies may further interfere with the exclusive rights of distribution of the rightholder. The Marrakesh exception, in substance, removes the obligation to seek permission from the copyright owner to make or share copies of printed material in accessible formats.

The surveys of those case studies contain survey questions about the channels used to access digital cultural goods, and why those channels are preferred over others. They also contain questions about respondents' knowledge and perception of copyright law and exceptions. Additionally, both surveys contain general demographic questions related to gender, age, nationality, and level of education. These demographic questions helped us to understand whether there are identifiable sources of heterogeneity between and within the respondents of the two surveys in relation to access needs, knowledge and perception of copyright law, and of copyright exceptions.

[3] Marrakesh Treaty, *supra* nt. 1.

[4] Directive 2017/1564/EU. Certain permitted uses of certain works and other subject matter protected by copyright and related rights for the benefit of persons who are blind, visually impaired or otherwise print-disabled and amending Directive 2001/29/EC on the harmonization of certain aspects of copyright and related rights in the information society (Marrakesh Directive); Regulation 2017/1563/EU on the cross-border exchange between the Union and third countries of accessible format copies of certain works and other subject matter protected by copyright and related rights for the benefit of persons who are blind, visually impaired or otherwise print-disabled (Marrakesh Regulation).

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1.2.2. Case Study 1: Research Questions

Case study 1 focuses on academics. The paradigmatic access issues faced by academics relate to their job at universities and display a societal impact in that they affect knowledge creation and diffusion. Indeed, academics need to access research articles and other scientific materials to conduct their teaching and research activities. Additionally, their work is at the forefront of the production and diffusion of knowledge in our societies. However, scientific articles and materials are not freely accessible to scholars and are often protected by copyright and costly to access. Academic publishers often own the copyright of scientific articles and charge high subscription costs to universities. Many scholars have recently argued that the cost of accessing scientific articles is unjustifiable in the digital era. Indeed, digital technologies had significantly lowered the cost of managing, printing, and distributing journals. Therefore, the cost for accessing research articles is often seen as a mere legacy of the past and a result of the monopolistic power of large publishers. As an answer to scholars' paradigmatic access problems, Alexandra Elbakyan founded Sci-Hub in 2011, providing free access to research papers and books worldwide. Today, the website is widely used in developed and developing contexts, reaching more than 400,000 requests per day in 2019.[5] However, since its foundation, Sci-Hub has been accused of copyright infringements and suspected of bypassing publishers' paywalls through stolen university accounts. The numerous lawsuits brought against Sci-Hub and Elbakyan provoked a reaction in the academic community. In particular, the academic community reopened the debate about access to scientific literature, open-access, and academic publishers (Hoy 2017; Gonzalez-Solar et al. 2019).

The advent of Sci-Hub and the resulting debate on academic publishers' business model saw the growing lead of some European universities. The clash between a major publisher and some European universities might affect the academics' perception of copyright law and popularize platforms such as Sci-Hub. Besides the revolutionary impact Sci-Hub might have on the academic world and on our society, very little empirical research systematically investigates how and why academics of various disciplines use Sci-Hub. Most of the empirical evidence is either concentrated on aggregate country data on Sci-Hub downloads (Till et al. 2019; Himmelstein et al. 2018; Bodó et al. 2020), or it relies on small samples, without a systematic data collection strategy or concentrates in one scientific field (Mejia et al. 2017; Nazarovets 2018). In contrast with past research, this study provides large scale empirical evidence on Sci-Hub usage in Europe. We collected data through a survey sent to all the faculty members - from PhD students to full professors - in six EU countries (Germany, Hungary, Ireland, Italy, The Netherlands, and Sweden). Our collection strategy ensured the coverage of very heterogeneous academic disciplines and accounts for different age and cohort effects.

To our knowledge, this study is one of the first systematic empirical analysis on academic piracy examining individual characteristics. Building upon the existing literature on the use of digital pirated products and scientific literature, our questionnaire (see section 3.1.2 for an overview of the structure) explores different drivers behind the use or the disapproval of academic piracy. We focus on factors such as perception and knowledge of the law, moral justification, reinforcement behaviour, and product quality (Eisend 2019; Phau et al. 2014; Jacobs et al. 2012; Coyle et al. 2009; Cronan et al 2008). Furthermore, we explore the extent to which academic norms, values, and working environment conditions might also explain the use of Sci-Hub (Sauermann et al. 2013; Haeussler et al. 2014; Walsh et al. 2007).

[5] As claimed by Elbakyan. See, Sci-hub (2021, June 7) *Wikipedia*. https://en.wikipedia.org/wiki/Sci-Hub#cite_note-roskomsvoboda-6 accessed 17 June 2021.

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Case Study 1 has been designed to answer two main research questions, as follows:

- R.Q.1. Investigated the knowledge and perception of copyright law and teaching and research exceptions of scholars
- R.Q.2. Examined the specific channels used by scholars to access the scientific literature with the focus of Sci-Hub and other shadow library websites.

R.Q.2 tested six research sub-questions, specific to academics and Sci-Hub, such as the drivers behind the use of Sci-Hub and other pirated products. The specific sub-questions are:

- R.Q.2.1. Does the use of Sci-Hub relate with the perception or knowledge of copyright law?
- R.Q.2.2. Is the use of Sci-Hub related to demographic characteristics (gender, academic rank, age, field)?
- R.Q.2.3. Does the use of Sci-Hub relate with the political ideology or morality of the individual?
- R.Q.2.4. Is the use of Sci-Hub related with past behaviour of other digital Pirated Products?
- R.Q.2.5. Is the use of Sci-Hub related with the quality of the product vis-à-vis the services provided by the university library?
- R.Q.2.6. Does the use of Sci-Hub relate with the institutional norms of the country/university?
- R.Q.2.7. Is the use of Sci-Hub related with colleagues' behaviour or the working environment?

1.2.3. Case Study 2: Research Questions

Case study 2 focuses on people with visual impairments. As noted above, for the purpose of this case study, we adopt a wide-ranging definition of people with visual impairments, to encompass blind persons, within a broad conceptualization of disability informed by the social-contextual model and aligned with the human rights model of disability, envisaged in the UN Convention on the Rights of Persons with Disabilities (CRPD) (Broderick & Ferri, 2019).[6] Hence, for the purpose of our case study, people with visual impairments include all persons that do not perceive works fixed in visual mediums and face barriers in accessing works that contain visual components, i.e. print works such as books, audio-visual works such as movies and television, websites and computer software, as well as pictorial, graphical, or sculptural works. These works must be either partially or entirely transformed into a medium that is not dependent on visual information, i.e. a tactile or auditory medium (Schreier et al 1991).

This case study is based on the paradigmatic access issues faced by this specific cohort of people with disabilities, which fall, as noted above, within the scope *ratione personae* of the Marrakesh Treaty. Notably, this Treaty has a broader scope than this specific case study, as it also applies (alongside persons with a visual impairment and blind persons) to persons that are 'otherwise unable, through physical disability, to hold or manipulate a book or to focus or move the eyes to the extent that would be normally acceptable for reading' (Article 3, Marrakesh Treaty). However, people with visual impairments have historically faced specific barriers in accessing printed materials (Rayini, 2017). The European Blind Union (EBU) highlights that only around 5% of books worldwide are available in Braille, and this figure is lower in developing countries.[7] The World Blind Union (WBU) contends that 'over 90% of all published materials cannot be read by blind or print-disabled people, leading to a 'book famine'.[8] While digitization is vital to ensure accessible cultural materials

[6] For a detailed outline of this conceptualization of disability, see Ferri, D., Higgins, N., Serra, L., and Donnellan, K., 'D2.2 Interim report on barriers experienced by vulnerable groups' (2021). https://zenodo.org/record/5067718#.YqrxmezMLq0 accessed 16 June 2022.

[7] The Marrakesh Treaty. (2020, March 9). *European Blind Union*. http://www.euroblind.org/campaigns-and_activities/current-campaigns/Marrakesh-treaty accessed 16 June 2022.

[8] Marrakesh Treaty: Marrakesh Treaty Ratification and Implementation Campaign. (n.d.). *World Blind Union*. https://worldblindunion.org/programs/marrakesh-treaty/ accessed 16 June 2022.

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and lower production costs, and also to facilitate cross-border exchanges (*inter alia* Brown, Harmon, Waelde, 2012), the book famine remains an issue.

The implementation of the Marrakesh Treaty globally is followed closely not only by legal scholars, but also by Disabled People Organizations (DPOs), Non-Governmental Organisations (NGOs) and service providers. The International Federation of Library Associations and Institutions (IFLA), which is the 'leading international body representing the interests of library and information services and their users',[9] has published an initial guide on the Treaty[10] and is periodically reviewing whether State Parties to the Marrakesh Treaty have passed the domestic legislation to implement it.[11] The IFLA also proposes an analysis as to whether they are maximising the potential for access. The Electronic Information for Libraries (EIFL) (i.e. a not-for-profit organization that works with libraries to enable access to knowledge in developing and transition economy countries in Africa, Asia Pacific, Europe, and Latin America) has also published a guide for librarians on the Marrakesh Treaty.[12] On the whole, the IFLA works in conjunction with the EIFL and the WBU to assist authorized entities in ensuring full enforcement of the Treaty and in overcoming any barriers to access to knowledge.

However, to our knowledge, current studies and the abundant grey literature are rooted in desk-based research and mostly focus on copyright law aspects. By contrast, this study provides an innovative empirical analysis across six EU Member States. It is also particularly timely in that it follows the adoption of the Marrakesh Treaty (and the relevant EU Directive and implementing measures), and considers perceptions of users with visual impairments themselves on current copyright exceptions for people with visual impairments across multiple jurisdictions. Building upon the existing literature on the barriers faced by persons with visual impairments in accessing printed material and on the work conducted under Task 2.2, our questionnaire explored what obstacles persons with visual impairments are facing in accessing printed material, and whether digitization has improved their access. We also aimed to understand what their knowledge and perception about copyright law is, and to ascertain their awareness about the innovations brought by the Marrakesh Treaty.

On the whole, Case Study 2 has been designed to answer two main research questions:

- R.Q.1. Investigated the knowledge and perception of copyright law and exceptions related to persons with visual impairments
- R.Q.2. Examined the specific channels used by persons with visual impairments in accessing printed materials.

The analysis of the survey, which was designed for lay people with visual impairments and aimed to capture different cohorts in terms of age and social background, allowed us to answer the following sub-research questions:

- Other sub-research questions related to R.Q.1.

[9] *International Federation of Library Associations* (2019, December 10). https://www.ifla.org/about accessed 16 June 2022.
[10] Getting Started with the Marrakesh Treaty - a Guide for Librarians. (2021, June 11). *International Federation of Library Associations.* https://www.ifla.org/publications/node/71175 accessed 16 June 2022.
[11] Implementing the Marrakesh Treaty: Monitoring Report. (2020, December 3) *International Federation of Library Associations.* https://www.ifla.org/publications/node/81925 accessed 16 June 2022.
[12] The Marrakesh Treaty: An EIFL Guide for Libraries. (2014, December 10). *Electronic Information for Libraries.* https://www.eifl.net/news/marrakesh-treaty-eifl-guide-libraries accessed 16 June 2022.

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- R.Q.1.1. Does the knowledge and perception of copyright law relate with demographic characteristics (such as age, gender, nationality, intersectional characteristic…)?
- R.Q.1.2. Is the Marrakesh Treaty known among persons with visual impairments? If so, is this perceived as a 'game-changer' in facilitating their access to printed material?

- Other sub-research questions related to R.Q.2:
  - R.Q.2.1. Do the channels to get accessible materials relate with demographic characteristics (such as age, gender, nationality, intersectional characteristic…)?
  - R.Q.2.2. Do the barriers to get accessible materials relate with demographic characteristics (such as age, gender, nationality, intersectional characteristic…)?

2. State of the Art

This section reviews the existing literature that was used to design our surveys, and builds extensively upon the interim report (D2.5).

2.1 EU Copyright Law and Exceptions to Copyright: Introductory Remarks

Copyright protection refers to a proprietary right of the author over their work, as the exclusive right to exploit the work and, accordingly, to retain control over the exploitation by others. However, copyright is not an unfettered right. Limitations and exceptions have been carved out to protect other competing rights or the public interest.

In the EU, copyright law has been significantly harmonized by way of an array of EU Directives, which include a list of limitations and exceptions, most of which are optional (Sganga, 2020). The InfoSoc Directive[13] had adopted a unified list of mandatory exceptions in Article 5(1), and twenty optional exceptions, provided for in Article 5(2), and Sganga (2020) suggests that

> 'exceptions were harmonised only to the extent necessary to the smooth functioning of the internal market (Recital 31 of the InfoSoc Directive), with the result of a quilt of national solutions and definitions, later restricted by recurrent limiting interventions by the European Court of Justice'.

Other Directives have introduced other exceptions, and/or partially amended the original text of the InfoSoc Directive, and Sganga (2020) notes that

> '[t]he result of this normative output is a quilt of provisions that are partly mandatory, partly optional, partly 'horizontal' and applicable to every protected work, partly 'vertical' and applicable only in specific fields, partly overridable by contract and partly not.'

The most recent Directive on Copyright in the Digital Single Market (CDSM Directive)[14] has introduced three horizontal exceptions to copyright, which are declared mandatory. Namely, articles 3 to 6 of the CDSM

[13] Directive 2001/29/EC. *The harmonization of certain aspects of copyright and related rights in the information society (InfoSoc Directive).* European Parliament, Council of the European Union. http://data.europa.eu/eli/dir/2001/29/oj accessed 17 June 2021.
[14] Directive 2019/790/EU. *Copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC (CDSM Directive).* European Parliament, Council of the European Union. http://data.europa.eu/eli/dir/2019/790/oj accessed 17 June 2022.

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Directive provide for exceptions or limitations in relation to text and data mining, for digital and cross-border teaching activities and for the preservation of cultural heritage.

reCreating Europe deals with exceptions at multiple levels and junctures. In this deliverable, we limit ourselves to recall that D2.1. comprehensively mapped EU and national copyright flexibilities and provided, *inter alia*, the following classification of exceptions and limitations:

- *De minimis* uses (e.g., temporary reproduction, ephemeral recording, incidental inclusion, technically necessary uses)
- Private non-commercial uses (e.g., reprography, private copy, freedom of panorama)
- Quotation
- Parody
- Teaching and scientific research (e.g. illustration for teaching and scientific research, digital teaching activity, text and data mining)
- Uses within/by cultural heritage institutions (e.g., public lending, preservation of cultural heritage, uses of orphan works, and of out-of-commerce works)
- Uses for persons with disabilities/persons with visual impairments
- Uses for an informatory purpose (e.g., news reporting, public speeches and lectures)
- Uses by public authority (e.g., public security, legislative and judicial proceedings, religious and official celebrations)
- Three-step-test
- Other non-infringing uses

Taking into account the wide legal analysis within the remit of Task 2.1, Task 2.5 focuses, as noted above, on two copyright exceptions as case studies. It is premised on the assumption that, in both cases, technological advancement (i.e. platforms, devices, apps) bring to the market digital devices or apps, or platforms that facilitate access to cultural material for those groups, but at the same time facilitate copyright infringements. Similar reasoning might imply that groups with specific needs, such as academics or visually impaired people, have a specific relationship with the copyright legislation. In particular, the interaction between the exceptions of which they are subject, the new digital technologies available, and their needs, could imply that their intention to pirate might be high. The following sections turn to analyse the state of art in relation to our two case studies.

2.2 Case study 1: Academics, Copyright law and Sci-Hub

Empirical research on the usage and perception of copyright law among academics is relatively scant. While few studies look at usage patterns of Sci-Hub, no large-scale empirical papers are looking at the relationship between academics' individual characteristics and preferences and academic piracy. From a broader perspective, however, we identify three streams of literature that might help us lay the foundations of the state of the art. The first relates to the business and management literature that examines attitudes, intentions and behaviour towards digital piracy, looking at consumers or corporate employees. The second relates to the economics of innovation literature that studies the behaviour of academics involved in patenting activities and more generally analyses their collaborations and sharing patterns. Finally, the third stream of literature covers interdisciplinary research in information research, communication, and library studies that concentrate on Shadow Libraries' websites and their consequences.

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2.2.1 Digital Piracy and Users

The business and management literature has addressed the understanding of consumers' behaviour concerning digital piracy. Most of these studies examine the consumers' attitudes, intentions, and practices towards pirated digital products such as movies and software. In a recent meta-analysis, Eisend (2019) examined 174 studies conducted in 36 countries between 1980 and 2016, focusing on the predictors of users' attitudes toward digital piracy, intentions to pirate, and actual pirating behaviours. In his review of the literature, Eisend (2019) underlines four groups of theories to explain digital piracy: i) reasoned action and planned behaviour, ii) ethical decision-making models, iii) perceived risk and expected utility theory, and iv) reinforcement mechanisms.

Reasoned action and planned behaviour are concentrated on the influence that the cultural dimension has on digital piracy (Chang MK 1998, Phau et al. 2014). For instance, the first is appropriate for collectivistic countries and considers attitudes, intentions, and behaviour, as driven by whether piracy is socially accepted or not. The second is more appropriate for individualistic countries and looks at the individual perceived control ability. In other words, whether performing piracy is easy or not for the individual. Ethical decision-making models consider the moral dilemma surrounding the act of using pirated digital products. As piracy implies the infringement of the copyright law (Jacobs et al. 2012), there is a trade-off between ethical sensitivity and users' moral justification towards digital piracy. The first negatively relates to attitudes, intentions, and behaviour, while the second has the opposite effect, providing excuses for breaking the law. Indeed, Nicholas et al. (2019) suggest that copyright infringements are often considered a '*mala prohibita*' rather than a '*mala in se*' for the users (i.e. something forbidden by law but not wrong per se).

The perceived risk and expected utility theory considers the impact that the expected positive or negative outcomes have on digital piracy behaviour (Coyle et al. 2009). The first focuses on the perceived negative outcomes that follow the use of pirated digital materials, which is the perceived risk of being caught or receiving social/institutional sanctions. The latter, instead, considers the positive expected outcomes following the act of using pirate products. For example, the money saved using the pirated product, or the quality of the pirated copy vis-à-vis the genuine product.

Reinforcement mechanisms underline how piracy behaviour and attitudes are influenced by agents' experience with pirating (Cronan et al. 2008). Recent literature found that the reinforcement mechanisms, so far neglected in many empirical investigations, have a crucial role in predicting future behaviour towards digital piracy (Eisend, 2019).

Following this literature, our survey included questions related to each of these theories, and tested whether they are important determinants for Sci-Hub use.

2.2.2 Academic Values, IPRs, and Sharing habits

The economics of innovation literature has a long tradition of studying the incentives and effects of academic patenting. While our focus is on a different intellectual property rights (IPRs), some findings might be relevant for copyright too.

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Sauermann et al. (2013) examined 5000 US life scientists and physical scientists in 2003, working in industry or academia, to highlight possible differences in preferences and principles. Their results show that academics have a different value system compared with scientists working in the industry. Academics are generally more interested in investigating fundamental knowledge, they value research freedom over bureaucratic control, their rewards system is based on peers' recognition and not on monetary rewards, and their main goal is to disseminate their knowledge through a scientific publication. However, their empirical analysis and other contributions highlight that academic and commercial values often overlap and things are more nuanced and are context-/field-specific (Sauermann et al. 2013, Walsh et al. 2007, Haeussler et al. 2014). Indeed, past research highlights that the competition level undermines the probability that scholars help each other by sharing research materials and results among themselves (Walsh et al. 2007, Haeussler et al. 2014).

Following this literature, we included in our survey questions related to the working environment, the scholars' sharing habits (e.g. sharing publications to colleagues without legal access), and the possession of patents.

2.2.3 Academics and Sci-Hub

The literature that studies specifically Shadow Library websites, such as Sci-Hub or LibGen, is in its infancy. The empirical literature on the subject is still sketchy, often based on data collected for only one scientific discipline, one country, or one institution, and the survey strategies are often not systematic. Nevertheless, this literature provides important insights into the usage that scholars have of Sci-Hub, highlighting the importance of demographic characteristics, such as gender and age, research intensity, and ideology (Nicholas et al. 2019, Gonzalez-Solar et al. 2019, Mejia et al. 2017, Hoy 2017, Duic et al. 2017).

2.3 Case study 2: People with Visual Impairments and the Marrakesh Treaty

2.3.1. People with Visual Impairments, Access to Printed Material and Copyright

In the past, people with visual impairments 'accessed books through Braille and books that had been read aloud (largely by volunteers) onto audio cassette tapes' (Harpur & Suzor, 2013). While digitalization has enabled people with visual impairments to access books digitally through assistive technologies, such as screen readers, magnifiers, and STT technologies, technological advances alone have not enhanced the accessibility of printed material. Harpur & Suzor (2013) note that 'the number and range of books that are accessible in electronic form remains low' and that the 'lack of access to textbooks and other educational works greatly hinders the education of people with print disabilities in primary, secondary and tertiary levels'. Ncube et al. (2020) contend that technologies play an important role in ensuring that individuals with disabilities participate effectively in education, entertainment, and other relevant activities in society. However, they note that 'the economics surrounding efforts to make copyrighted works accessible are complex', and argue that converting 'copyrighted works into accessible formats is often labour- and cost-intensive'. Most notably, those authors also state that:

> '[b]eyond the question of cost and labour intensiveness, the accessibility technologies require, first and foremost, an *enabling legal framework*, especially as deploying them to transform content for easy access for persons with disabilities may implicate copyright and related rights' (*emphasis added*).

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In a similar vein, other authors have emphasized that one of the main challenges to making printed material accessible is copyright protection, which prevents digitization, or makes a digital book itself inaccessible (Giannoumis et al, 2017). Regarding the latter case, so-called technological protection measures (TPMs), such as encryption, may prevent or interfere with the use of assistive technologies with electronically distribute literary works, such as e-books. The adverse effects of TPMs on people who are blind, visually impaired, or print disabled and the fact that TPMs limit the capacity of libraries to convert digital media to accessible formats - even when the conversion would actually be permitted under copyright law - have been consistently highlighted (Ellis & Kent, 2011; Morgan, 2003).

'Disability exceptions' to allow people who are blind, visually impaired, or print disabled to convert inaccessible copyrighted works into accessible and useable formats are longstanding but also quite diverse in national copyright laws and have also been discussed at length by literature (for an overview, see *inter alia* Sullivan, 2007; Reid & Ncube, 2019). However, many scholars have claimed that those exceptions were sparse, narrow and insufficient to protect the rights of persons with visual impairments (Rekas, 2013; Sganga, 2020). In this respect, Harpur & Suzur (2013) defined the pre- Marrakesh model of limited exceptions as inefficient and ineffective. Concerning the EU, Sganga (2020) noted, within the remit of a Public Consultation on the Review of the EU Copyright Rules[15], that

> 'end-users with disabilities lamented low accessibility levels, obstacles to the enjoyment of exceptions created by TMPs, and uncertainty and chilling effects on the import/export of accessible copies due to the fragmented implementation of Article 5(3)(b) of the InfoSoc Directive'.

Indeed, only after the Marrakesh Treaty was approved under the auspices of the WIPO and entered into force, exceptions aimed at enabling persons with visual impairments to access printed material have come under the spotlight of policymakers and scholars.

2.3.2. The Marrakesh Treaty

The Marrakesh Treaty was adopted on June 27, 2013 and entered into force on June 30, 2016. The CRPD influenced the negotiation of the Marrakesh Treaty. Notably, Article 30 CRPD requires States Parties *inter alia* to take steps 'to ensure that laws protecting intellectual property rights do not constitute an unreasonable or discriminatory barrier to access by persons with disabilities to cultural materials'. Several disability activists, service providers[16], and disability scholars have praised the Marrakesh Treaty for supporting the realization of the CRPD (*inter alia* Broderick & Ferri, 2019). In that regard, it is important to recall that Article 30 CRPD requires intellectual property (IP) not to be used as a barrier to accessing cultural materials for persons with disabilities. According to Saez (2017), 'the CRPD pre-exists the Marrakesh Treaty

[15] European Commission. (2014) *Report on the Responses to the Public Consultation on the Review of the EU Copyright Rules, July 2014*. http://www.prawoautorskie.gov.pl/media/consultation-report_en.pdf accessed 16 June 2022.

[16] See for example, Cox, K L. (2018, October 10). ARL Celebrates President Trump's Signing of the Marrakesh Treaty Implementation Act, Urges Administration to Complete Implementation. *Association of Research Libraries.* https://www.arl.org/news/arl-celebrates-president-trumps-signing-of-the-marrakesh-treaty-implementation-act-urges-administration-to-complete-implementation/#.W_wgE_ZFzyQ accessed 16 June 2022; See also Saikia, M. (2016, October 15). Marrakesh Treaty: Revolution for the Print Disabled. *Daily Pioneer.* https://www.dailypioneer.com/2016/columnists/marrakesh-treaty-revolution-for-the-print-disabled.html accessed 17 June 2021 accessed 16 June 2022.

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by seven years, and it provides a human rights foundation for the treaty'. In that connection, Giannoumis et al. (2017) suggest that

> 'The Marrakesh Treaty […] is unique among regulatory efforts at the intersection of human rights and IP because it explicitly creates legal, policy, and institutional bridges between these regimes. It integrates the principles of participation and consultation under the CRPD into IP policy making around the accessibility of books and other cultural materials. The Treaty therefore provides a basis for involving intellectual property rights-holders and individuals with disabilities in conversations around how to reconcile these competing regulatory aims of intellectual property and disability rights legislation'.

In a similar vein, several scholars argue that the Marrakesh Treaty aligns with human rights norms by achieving the goal of protecting creative outputs, while concurrently securing access (Helfer et al, 2017). Zemer & Gaon (2015) state that the Marrakesh Treaty is a 'humanitarian treaty, constituting a segment of WIPO's development agenda, formally adopted in 2007'. Trimble (2014) contends that

> 'The Marrakesh Treaty is a different species of international IP treaty – one that is more likely than ACTA to appeal to the current sentiment that many copyright experts and some stakeholders share; this sentiment has significant public support because it opposes further strengthening of copyright protection and promotes greater emphasis on users' interests – goals that seem to be shared by many of, if not most of, the members of the public'.

On the whole, the Marrakesh Treaty obliges State Parties to introduce a set of limitations and exceptions to copyright rules permitting reproduction, distribution and making available of published works in formats that are accessible to persons who are blind, visually impaired or otherwise print-disabled. Furthermore, it permits the exchange of these works across borders by organizations that help those beneficiaries. In this respect, Trimble (2014) notes that the Marrakesh Treaty is unique, in that no Treaty before had been based entirely on exceptions and limitations.

As mentioned above, the scope of the Treaty, when it comes to beneficiaries, extends its protection to all those persons with disabilities that cannot access effectively printed material. According to Article 3, a beneficiary person is a person who:

> (a) is blind;
> (b) has a visual impairment or a perceptual or reading disability which cannot be improved to give visual function substantially equivalent to that of a person who has no such impairment or disability and so is unable to read printed works to substantially the same degree as a person without an impairment or disability; or
> (c) is otherwise unable, through physical disability, to hold or manipulate a book or to focus or move the eyes to the extent that would be normally acceptable for reading.

Helfer *et al.* (2017) argue that '[i]ndividuals who experience temporary blindness or visual impairment, perceptual or reading disability, or a physical disability that interferes with reading, are entitled to benefit from the [Marrakesh Treaty] for as long as that condition persists'. They also suggest that the beneficiaries are 'defined by reference to the functional and social barriers that prevent disabled individuals from

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accessing traditional printed works' and not by their impairments, such as traumatic brain injury, dyslexia, or dementia.

The material scope of the Treaty covers all those works 'in the form of text, notation and/or related illustrations, whether published or otherwise made publicly available in any media' (Art. 2.a). Those also include audio books.

Authorized entities or entities recognized by the government 'to provide education, instructional training, adaptive reading or information access to beneficiary persons on a non-profit basis' (Art. 2.c) must be permitted, 'without the authorization of the copyright rightholder, to make an accessible format copy of a work, obtain from another authorized entity an accessible format copy, and supply those copies to beneficiary persons by any means, including by non-commercial lending or by electronic communication by wire or wireless means, and undertake any intermediate steps to achieve those objectives' (Art. 2.a), on a non-profit basis and for the supply of the copies for use by beneficiary persons (Art. 4). Furthermore, the Marrakesh Treaty obliges State Parties to import and export accessible format copies under certain conditions (Art. 5). However, the Treaty leaves some room for manoeuvre to State Parties allowing them to take into account their own legal systems and practices (Art. 10), including determinations on 'fair practices, dealings or uses', provided they comply with their three-step test obligations under other relevant international treaties.[17] Contracting parties may also 'confine limitations or exceptions [...] to works which, in the particular accessible format, *cannot be obtained commercially* under reasonable terms for beneficiary persons in that market' (*emphasis added*) (Article 4(4)).

As yet, the Marrakesh Treaty has attracted a lot of attention among copyright scholars (*inter alia* Sganga, 2015; Köklü, 2014; Vezzoso, 2014; Ayoubi, 2015; Helfer, Land & Okediji, 2020; Vleugels, 2020). In 2017, the WBU supported the publication, by Oxford University Press, of a 'Guide to the Marrakesh Treaty' (Helfer et al., 2017). The Guide aims to explicate the content of the Treaty, its implementation, and to support State Parties in deciding how to incorporate the Marrakesh Treaty into their domestic systems. Academic scholarship has also discussed the somewhat flexible nature of the Treaty and the discretion left to State Parties to implement provisions into domestic laws and practice as they see fit (Land, 2018), as well the implementation of the Marrakesh exception in selected jurisdictions from multiple perspectives (Olwan, 2017; Kouletakis, 2020; Li & Selvadurai, 2017; 2019; Chaouch, 2014; Cassells, 2021). There appears to be a recurring theme within current disability scholarship about whether the Treaty sufficiently fulfils the rights of persons with disabilities, or should be broadened to include other disabilities, as many feel the current framework falls short by only including print-disabled persons. There are also some recent studies on the effectiveness of copyright exceptions for people with visual impairments in selected jurisdictions (Girish, 2021), but as yet, an EU cross-national investigation on the effects displayed 'on the ground' by the Marrakesh Treaty and on the perception of it among End-users is still lacking.

[17] The three-step test is a basic principle used to determine whether an exception or limitation is permissible and requires that any exception or limitation: (1) must cover only certain special cases; (2) must not conflict with the normal exploitation of the work; and (3) must not unreasonably prejudice the legitimate interests of the rightholder.

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2.3.3. The Marrakesh Treaty in the EU

The EU only ratified the Marrakesh Treaty on 1 October 2018, following Opinion 3/15 of the Court of Justice of the European Union (CJEU),[18] almost four years after the EU Council decided to sign the Marrakesh Treaty for the EU. It was implemented by the EU legislator by means of a Directive (2017/1564/EU, Marrakesh Directive),[19] amending the InfoSoc Directive, and a Regulation (2017/1563/EU, Marrakesh Regulation).[20] The implementation of this Directive has been monitored and mapped in Task 2.1 (see D2.1 on legal mapping). The Marrakesh Directive 'aims to further harmonise Union law applicable to copyright and related rights in the framework of the internal market' (Art. 1) and introduces a mandatory exception to the harmonized rights of creators and authors, empowering beneficiaries and authorized entities to undertake the necessary steps to transform printed works (e.g. books, newspapers, magazines, etc.) into an accessible format[21] for their own benefit (Art. 3). The copyright exception relates to the reproduction right; the right of communication to the public; and the right of making available to the public (as required by the Marrakesh Treaty). It also encompasses the distribution right. The Directive incorporates the reference to the three-step test by explicating that the exception 'shall only be applied in certain special cases which do not conflict with a normal exploitation of the work or other subject matter and do not unreasonably prejudice the legitimate interests of the right-holder' (Art. 3(3)).

Significantly, the provision of the InfoSoc Directive concerning the non-obstruction of the enjoyment of copyright exceptions by TPMs applies *mutatis mutandis* in the context of the Marrakesh Directive (Art. 3(4), with reference to the first, third and fifth sub-paragraphs of Art. 6(4) InfoSoc Directive). This means that right-holders cannot invoke TPMs to prevent persons falling within the scope of the Marrakesh Directive from enjoying their rights provided for in that Directive. However, authorized copies must respect the integrity of the original work as far as possible (Article 3(2)). Article 3(6) of the Marrakesh Directive enables Member States to provide that uses permitted under the Directive, if undertaken by authorised entities established in their territory, be subject to compensation schemes (Oppenheim, 2017).

Article 4 of the Marrakesh Directive requires Member States to ensure that an authorized entity established in their territory can 'make an accessible format copy of a work or other subject matter to which it has lawful access, or to communicate, make available, distribute or lend an accessible format copy to a beneficiary person or another authorised entity on a non-profit basis' (Art. 3(1)(b)) established *in any Member State*. Member States must also ensure that a beneficiary person or an authorized entity may request an accessible format copy from an authorized entity established in any Member State. (Art. 4) These provisions should facilitate the circulation of accessible copies within the internal market. Moreover, to facilitate such cross-border exchanges in the EU, the Marrakesh Directive requires authorized entities to exchange information (Art. 6).
Finally, the Regulation, which is complementary to the Directive, provides for a copyright exception allowing for the cross-border exchange of accessible format copies of certain works that are ordinarily protected by copyright between EU Member States and Non-EU Member States who are party to the Marrakesh Treaty.

[18] Opinion 3/15/CJEU. *Opinion 3/15 of the Court pursuant to Article 218(11) TFEU.* Grand Chamber of the Court of Justice of the European Union. EU:C:2017:114
[19] *Supra* nt. 4
[20] *Supra* nt. 4
[21] This is defined in Article 2(3) of the Directive in line and compliance with the Marrakesh Treaty. According to this provision 'accessible format copy' means a copy of a work or other subject matter in an alternative manner or form that gives a beneficiary person access to the work or other subject matter, including allowing such person to have access as feasibly and comfortably as a person without any of the impairments or disabilities covered by the Marrakesh Treaty.

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As discussed elsewhere (Ferri and Donnellan, 2022), the Marrakesh Directive complemented and contributed to the solidification of the 'disability exception' included in the original text of Article 5(3)(b) of the InfoSoc Directive. In fact, it also introduced an amendment to the consolidated text of the InfoSoc Directive. The amended Article 5(3)(b) still affirms that Member States 'may provide' for exceptions or limitations to the rights of reproduction and communication to the public for the 'uses, for the benefit of people with a disability, which are directly related to the disability and of a non-commercial nature, to the extent required by the specific disability', and it also makes clear that this is without prejudice to the obligations of Member States under the Marrakesh Directive, which instead introduced a mandatory exception. This means that Member States still may (but are not required to) provide for an exception or limitation to the rights of reproduction and communication, as well as distribution (as provided for by Article 5(4) of the Infosoc Directive), for the benefit of persons with disabilities, in cases which do not fall under the scope of the Marrakesh Directive, i.e. 'as regards works and other subject matter and disabilities other than those covered by' the Marrakesh Directive (Art. 5(3)(b)).

The current 'disability exception' in EU copyright law is hence characterized by a compulsory, fully harmonized exception to the reproduction right; the right of communication to the public; the right of making available to the public and the distribution right for the benefit of the three (broadly defined) categories of persons with disabilities identified by the Marrakesh Directive, and an optional exception to the right of communication to the public and to to the right of reproduction (and potentially the right of distribution) for other categories of beneficiaries with disabilities laid down in the InfoSoc Directive. The blurred contours of this remaining 'optional' expansive exception leave the door open to residual divergences across Member States, albeit for the purpose of enlarging the plethora of beneficiaries of the exception.

As yet, scholarly contributions have been published on the Marrakesh Directive and Regulation (Oppenheim, 2017; Sganga, 2020; IFLA, 2017). Furthermore, a report from the European Parliament in 2016, which laid out the core tenets of the Treaty, presented a discussion on the implementation options for the EU (Ramirez-Montes, 2016). Scholars have also discussed at length the ratification process (Ramalho, 2015) and the EU exclusive competence to ratify the Marrakesh Treaty (Kübek, 2018; Verellen, 2017; Kübek, 2017). Little has been published on the implementation of the Marrakesh Directive in EU countries (see e.g. Banasiuk, 2019 on Poland), and to our knowledge no empirical research has been conducted on the actual application of the copyright exception. In this respect, the case study conducted was innovative and aimed to fill a gap in current knowledge.

2.3.4. The Implementation of the Marrakesh Directive in the Countries under Study

The legal mapping table below outlines the legislative impact of the implementation of the Marrakesh Directive across the six Member States subject to our case study: Germany, Hungary, Ireland, Italy, The Netherlands, and Sweden. It details the state of the current copyright exception for beneficiaries of the Marrakesh Treaty, arising from the implementation of the Marrakesh Directive in each State, in terms of the *ratione personae* (personal scope), *ratione materiae* (material scope) and rights covered by the Marrakesh copyright exception. It also elucidates specificities relating to each domestic implementing legislation, such as, the whether a compensation schemes was implemented (as per the option provided for in Article 3 of the Marrakesh Directive) (see Table 1 below).

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	Personal Scope	Material Scope	Rights Covered	Specificities
Germany	Persons who are unable, as a result of a physical or mental impairment or of a perceptual disability, to read literary works, even with the assistance of a visual aid, to substantially the same degree as persons without such an impairment or disability	Any work or subject matter	Rights of reproduction, communication to the public, distribution, rental and lending rights.	Beneficiaries' access to the work in an already available format must be impossible or made considerably more difficult due to the disability Compensation Scheme (unless for individual use)
Hungary	Blind; visual impairment that can't be corrected to allow for reading of printed work on equal basis to people without impairment; perception difficulties that prevent person reading printed works on equal basis with people without difficulties; inability to keep or browse through a book and to move or focus eyes in order to read, due to disability	Any work published in the form of a written or other sign system, including illustrations thereof, including digital and audio versions thereof	Rights of reproduction, communication to the public, distribution	
Ireland	General Disability: substantial restriction in the capacity of the person to work or to participate in social and cultural life due to an enduring physical, sensory, mental health or intellectual impairment	Any work or subject matter	Rights of reproduction, communication to the public, distributed, rental and lending	Persons with disabilities or designated bodies need to use licensing schemes
Italy	Blind; visual impairment; perceptive or reading disability that prevents reading to extent equivalent to person without disability; physical disability that prevents the functions normally needed for reading	Works having a creative character and falling into the fields of literature, music, figurative arts, architecture, theatre or cinematography, whatever their mode or form of expression, including computer programs.	Rights of reproduction, communication to the public, making available, distribution, rental and lending	
Sweden	Persons with limited functional ability	Literary works, including descriptive works (e.g. maps, construction drawings), musical works, works of visual arts which have been published	Rights of reproduction, distribution, communication to the public	Compensation scheme where beneficiary keeps or reproduces the accessible work
The Netherlands	Reading handicapped person	Artistic, literary and scientific works	Rights of reproduction, translation, distribution, communication to the public	Compensation for author where the beneficiary keeps or reproduces the accessible work

Table 1: Post-Marrakesh domestic copyright exceptions for beneficiaries

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This legal mapping was constructed using official legislative databases from each subject State, and supported by a recent EU 'Report on the availability of certain copyright protected works for persons with disabilities within the internal market' (EU Commission, 2022). It was then cross-checked against national expert reporting conducted under Task 2.1 by research partners at Sant'Anna School of Advanced Studies (SSSA).

A more detailed table is provided in Annex 3 of this Deliverable, outlining the state of the copyright exception for blind and visually impaired beneficiaries prior to Marrakesh, the legislation implementing the Marrakesh Directive into the domestic law of each State, and the state of the copyright exception for Marrakesh beneficiaries as a result of these legislative amendments (see Annex 3 below). This table traces the legislative development of the copyright exception for beneficiaries of the exception (i.e. blind, visually impaired or otherwise print-disabled persons) following the implementation of the Marrakesh Treaty, revealing its legislative impact on the copyright law frameworks of each subject State. Moreover, it shows that divergences remain between Member States, including among the six subject Member States. These divergences are not unexpected. As detailed above, the Marrakesh Directive left some discretion to Member States in its implementation (see section 2.3.3. above). Such residual divergences between Member States are evidenced, for example, in the choice to implement compensation schemes, and we see that out of the six States, only Germany, The Netherlands and Sweden chose to implement a compensation scheme.

3. Methodology and Results

This section describes the methods adopted to undertake Task 2.5. First, we identified our target populations (academics and visually impaired persons), sampling methods, and then, we designed our surveys to answer the research questions indicated above. The two surveys were conducted across six EU countries: Germany, Hungary, Italy, Ireland, the Netherlands, and Sweden. The selection is also supported by the legal mapping conducted under Task 2.1. and the systematic study of the national copyright systems. The differences in the population for case study 1 and case study 2 required different research approaches, which will be further explained below.

3.1 Case Study 1: Methodology and Results

3.1.1. Empirical Research Methods

Our theoretical framework for answering the research questions of case study 1, highlighted above, built upon three bodies of literature (for an overview see section 2.2.). In terms of methodology, to answer R.Q.1 we relied upon a descriptive statistical analysis examining respondents' answers to questions related to their perception and knowledge of copyright law. We included both general questions on copyright law and exceptions, and more practical ones related to scholars' activity. The latter aimed to test scholars' practical knowledge on copyright teaching and research exceptions.

R.Q.2 used, as a general framework, the business and management literature that examines attitudes, intention and behaviour towards digital piracy looking at consumers or corporate employees. Beyond that, we considered, for answering R.Q.2, specific issues that academics face when working at universities. For this, we complemented our framework by relying on the economics of innovation, science of science, and the interdisciplinary literature on Sci-Hub. Following this structure, to answer R.Q.2, we modelled the probability of using Sci-Hub using a logistic regression approach, to test simultaneously all the sub-questions

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highlighted in the previous section. Our dependent variable was the dummy *Use_Sci_Hub,* which is equal to 1 if the person ever used Sci-Hub, and 0 if otherwise.

Figure 1 shows some of examples of how the specific research questions are operationalised in term of the survey questions, and therefore the variables that we identified as important predictors of the use of Sci-Hub. In our framework, the knowledge individuals have of copyright law might influence their use of Sci-Hub (R.Q.2.1) and at the same time the behaviour towards digital pirated products (both in general terms and specific to Sci-Hub) might be influenced by the demographic characteristics (R.Q.2.2), the moral perception of the copyright law (R.Q.2.3), the past behaviour for other pirated products (R.Q.2.4), the original product/service characteristics compared to the pirated copy (R.Q.2.5), the institutional norms of the university (R.Q.2.6), the social environment in terms of colleagues' behaviour, and the characteristics of the working environment (R.Q.2.7).

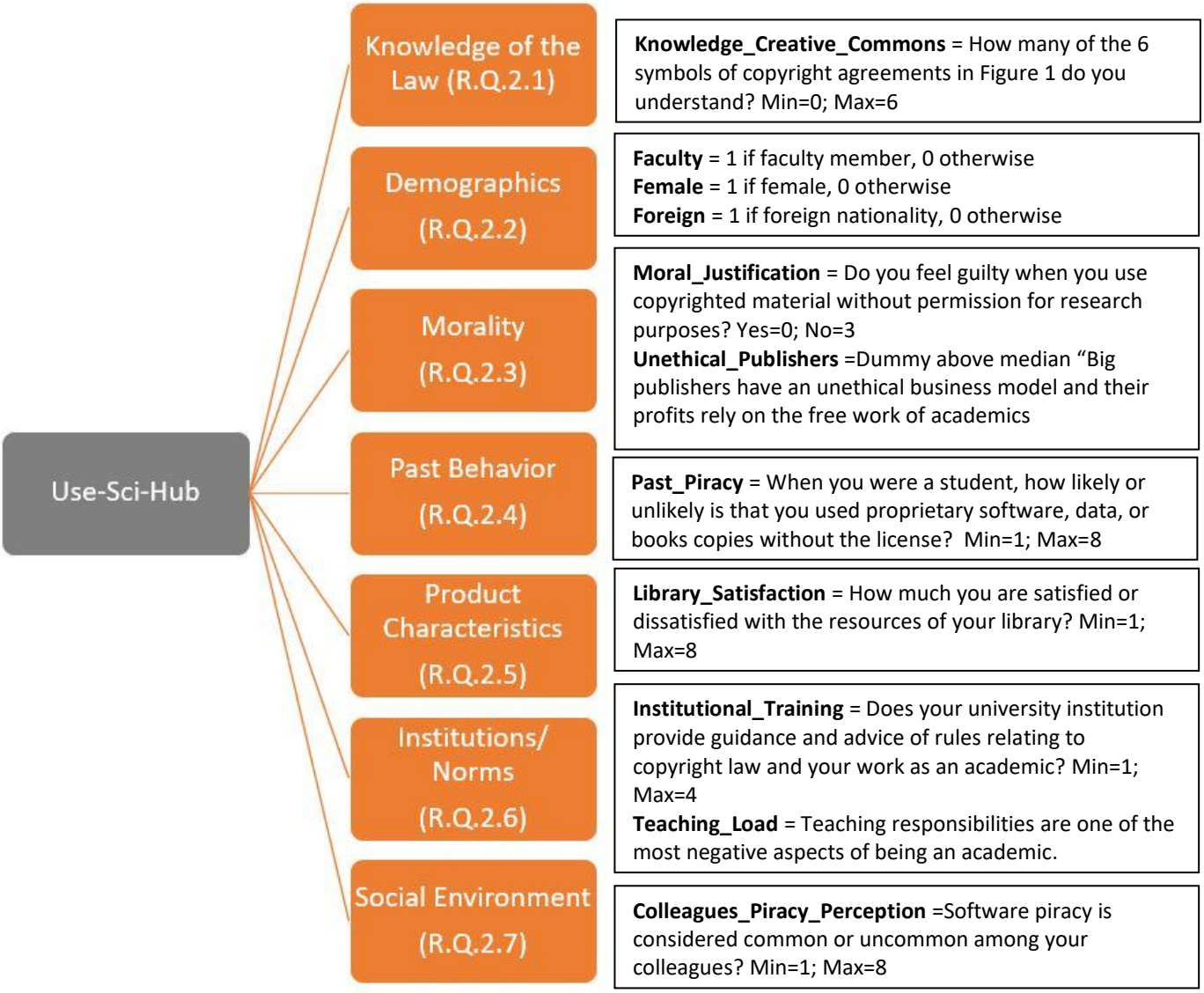

Figure 1 Theoretical Framework of R.Q.2 and examples of Variable Description.

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3.1.2. Research Design

Our survey for Case study 1 contained 54 questions and took approximately 15 minutes to complete. We attach the complete survey in Annex 1. The 54 questions were grouped in 3 blocks, covering different aspects:

- Block 0 comprised demographic questions such as gender, year of birth, academic rank, ERC scientific category (proxy for field), and nationality.
- Block 1 focused on questions related to respondents' general perception and knowledge of copyright law, their institutional norms and morality, their working environment, and their and their colleagues' past behaviour in terms of pirated digital products.
- Block 2 contained questions derived from our main dependent variable on respondents' use of Sci-Hub. Additionally, Block 2 included questions on respondents' colleagues' use of Sci-Hub, the scientific literature access through respondents' institution's library vis-à-vis the characteristics of the Sci-Hub website, and the behaviour and norms related to sharing scientific literature with other scholars.

To reduce survey fatigue and possible biases given by attrition[22], we randomized the order of Block 1 and Block 2, as described in Figure 1. Since both fatigue and attrition are influenced by the order of questions, this strategy sought to neutralize the potential harm of those biases.

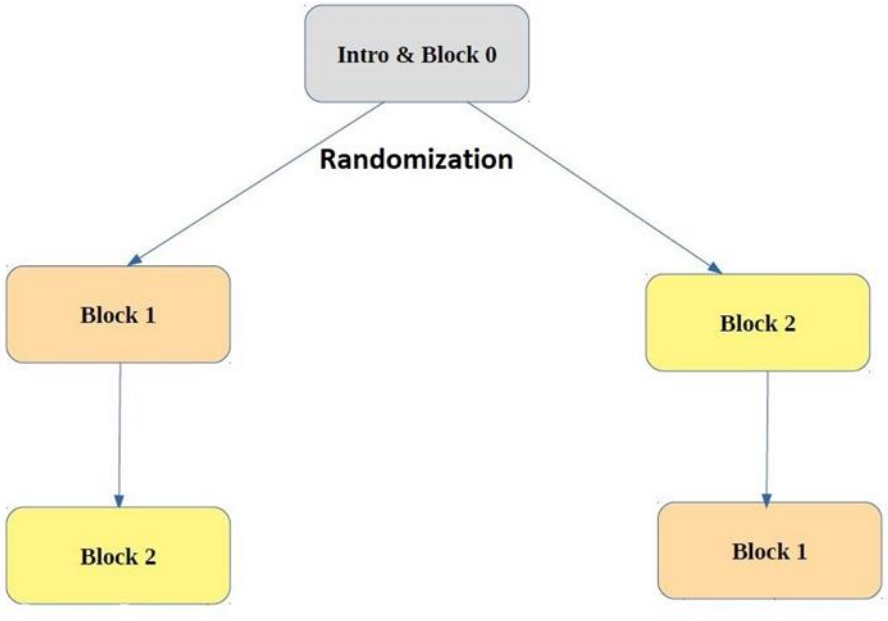

Figure 2 Block Randomization. In order to reduce the survey fatigue, we randomly assigned each respondent to answer first ether Block 1 or Block 2

3.1.3. Data Collection

We distributed the survey by email between June and October 2021. In this section, we describe our sampling strategy and the data collected.

Our target population were academics working in Germany, Hungary, Ireland, Italy, The Netherlands, and Sweden. The countries have been elected to represent a mix of EU Member States, and a range of EU academic population and different universities systems. We selected Germany to represent the Central

[22] By survey attrition we refer to the fact that some respondents might not fill out certain questions or may not finish the survey.

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European university systems, Italy as a proxy of Southern European systems, Hungary for the Eastern European systems. Sweden and the Netherlands represent Nordic countries systems (broadly conceived of), and Ireland represent the Anglo-Saxon university system. The European Statistics aggregated by European university systems and their list of countries are in the appendix C.
We targeted all academics working at top universities in these six countries. We stratified our sample in the following way. Using the 2021 Times Higher Education World University Rankings, we selected the top 5 ranked universities for each country. The list of universities and their characteristics are in Appendix E. We web-scraped 19,700 webpages of those selected 30 universities, collecting all email addresses of university staff available on their websites.

We sent our questionnaire to the entire population of persons working at those selected universities collected in our list of 104,000 email addresses. In this way, we collected 2,850 responses with an average response rate of 4%, and ranges between 3% to 7% depending on the country.[23]

3.1.4. Demographic Characteristics of the Sample

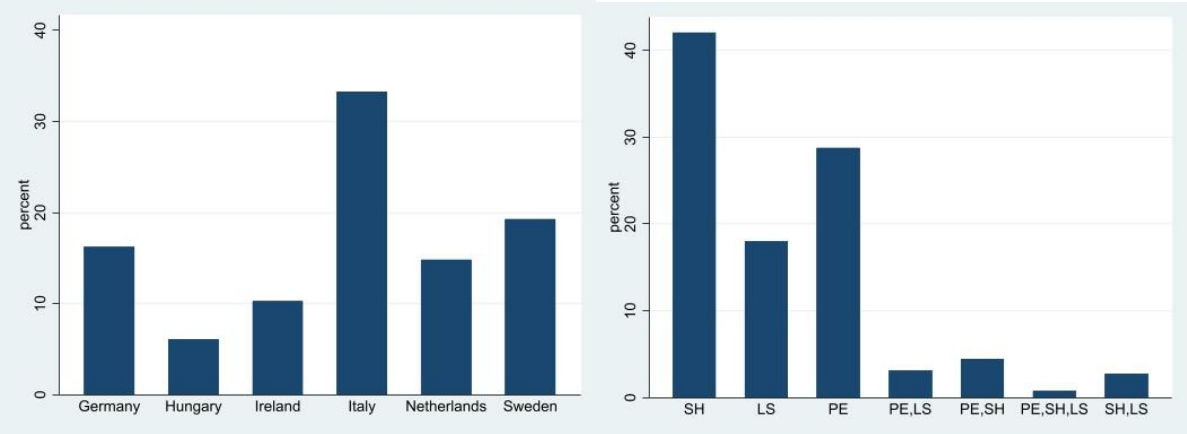

Figure 3 Distribution of respondents by Country (left) and by ERC scientific field (right). SH is Social Sciences and Humanities; LS is Life Sciences; PE is Physical Sciences and Engineering.

In this section we show our respondents' demographic characteristics. Considering the distribution of respondents, we have a good representation across country and scientific disciplines. 16% of respondents are from Germany; 6% from Hungary; 10% from Ireland; 33% from Italy; 15% from The Netherlands; and 19% from Sweden (See figure 3 left-hand side). In appendix D we show how the distribution across countries in our sample compares to the academic staff reported by Eurostat in 2020. Thus, we find that our sample slightly underrepresents scholars in the Central European and Eastern European universities systems while Northern European scholars are slightly over-represented.
The representation across scientific disciplines is good (see figure 3 right-hand side). 18% of respondents are from Life Sciences (LS); 29% are in the field of Physical Sciences & Engineering (PE); 42% are from Social Sciences & Humanities (SH); and the remaining 11% conduct cross-domain research. However, European statistics of academic staff disaggregated by disciplines are not available, thus, to highlight the representativeness of our sample we had to compare our field distribution with those of students' enrolments. In Europe the 45% of students are enrolled in SH, followed by 28.8% enrolled in PE, and 14% are

[23] We should consider that we surveyed the whole population, including the purely administrative staff that were beyond our target, but we were not able to eliminate from our email list. Thus, our estimation of the response rate is a conservative estimate, and our response rate it is likely to be much higher.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 870626.

enrolled in LS.[24] Thus, the distribution of students' enrolments by fields matches that of our sample Additionally, 40% of our respondents are female, the latter is in line to the 41.3% of female scholars reported by the European Commission for EU-28 in 2016[25] In terms of nationality 20% of our respondents have a foreign nationality (31% of respondents with a foreign nationality come from a developing or emerging economy).

In terms of pirate behaviour, one important demographic characteristic is age. Young users are usually more involved in piracy activities, thus a good representation of academics in terms of age is needed to have a good representation of the use of Sci-Hub. Figure 3 shows the distribution of respondents by age, where the red line at 44.47 years old is the average age of the sample. To check whether we our survey was representative in terms of age of European university staff, we ran a 1 sample t-test comparing the sample mean of our age distribution in Figure 3 with the average age of academic staff provided by the OECD.[26] For EU22, this is 44.6 years old. We found a p-value of 0.5976, meaning that we were unable to reject the null hypothesis that the sample mean of age in our sample was equal to the average age of EU22 provided by the OECD. This ensured us that our sample was representative in terms of age of EU university staff.

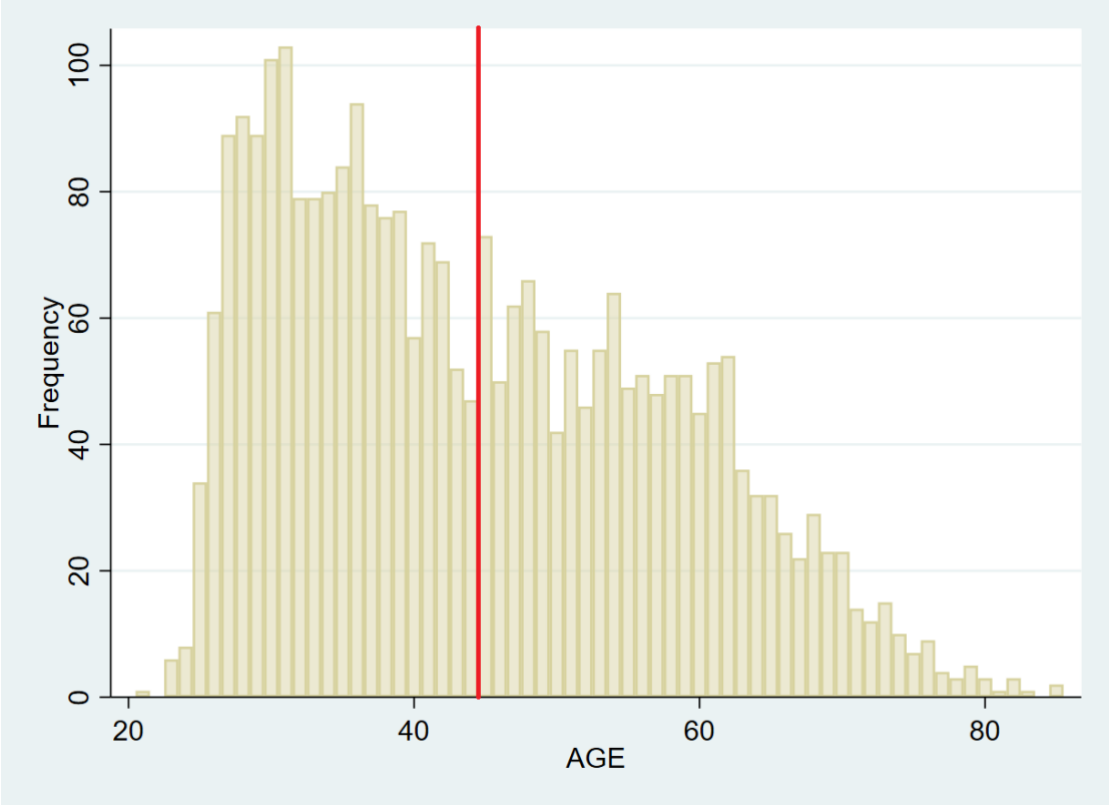

Figure 4 Distribution of respondents' age. The red line is the sample average age at 44.47 years old, the Median age is instead 42 years old.

3.1.5. Perception of Copyright Law

In this section we answer R.Q.1., investigating the perception that scholars have on copyright law. To do that, in our survey we asked several questions. First, we asked about their perception of their knowledge of

[24] See https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Tertiary_education_statistics
[25] Datum available at https://www.catalyst.org/research/women-in-academia/
[26] Datum available at Distribution of teachers by age and gender (n.d.) *OECD.Stat.* Available at: https://stats.oecd.org/Index.aspx?DataSetCode=EAG_PERS_SHARE_AGE# accessed 16 June 2022.

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copyright law, asking *"What is your expertise of the national laws on the topic of copyright?".* Responses' distribution in Figure 5 shows that 51% of respondents perceived a lack of knowledge on the national laws on copyright and indicated that they are not knowledgeable at all or have just slight knowledge of the subject.

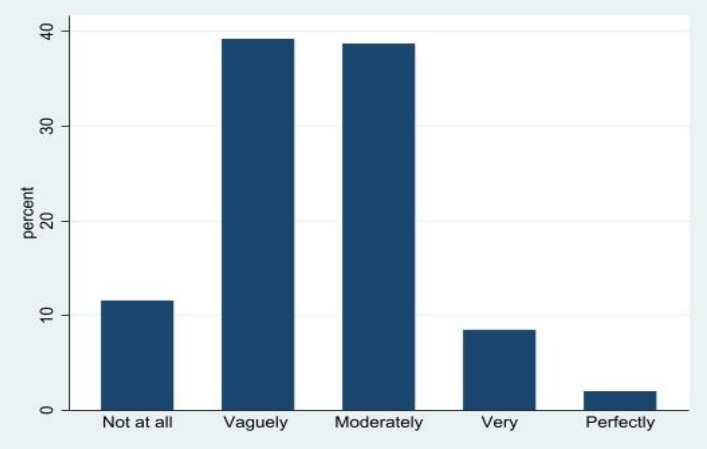

Figure 5 distribution of answers of copyright knowledge perception. The question is "What is your expertise of the national laws on the topic of copyright?" Answers are 5 from "Not knowledgeable at all" to "Perfectly knowledgeable".

Further, we asked how familiar they were with specific topics of copyright law, such as orphan works, copyright duration, copyright exceptions, authorship and ownership, out of commerce work, licencing activities, and asked them to indicate a number from 0 *(not familiar at all)* to 100 *(perfectly familiar)*.

In Figure 6 we show the box plots of the respondents' answers across copyright topics. We can observe that respondents perceived a higher familiarity with authorship and ownership of copyright (mean 56), and with copyright duration (mean 46). In contrast, they were less familiar with orphan works (mean 13), out of commerce works (mean 22) and copyright exceptions (mean 27).

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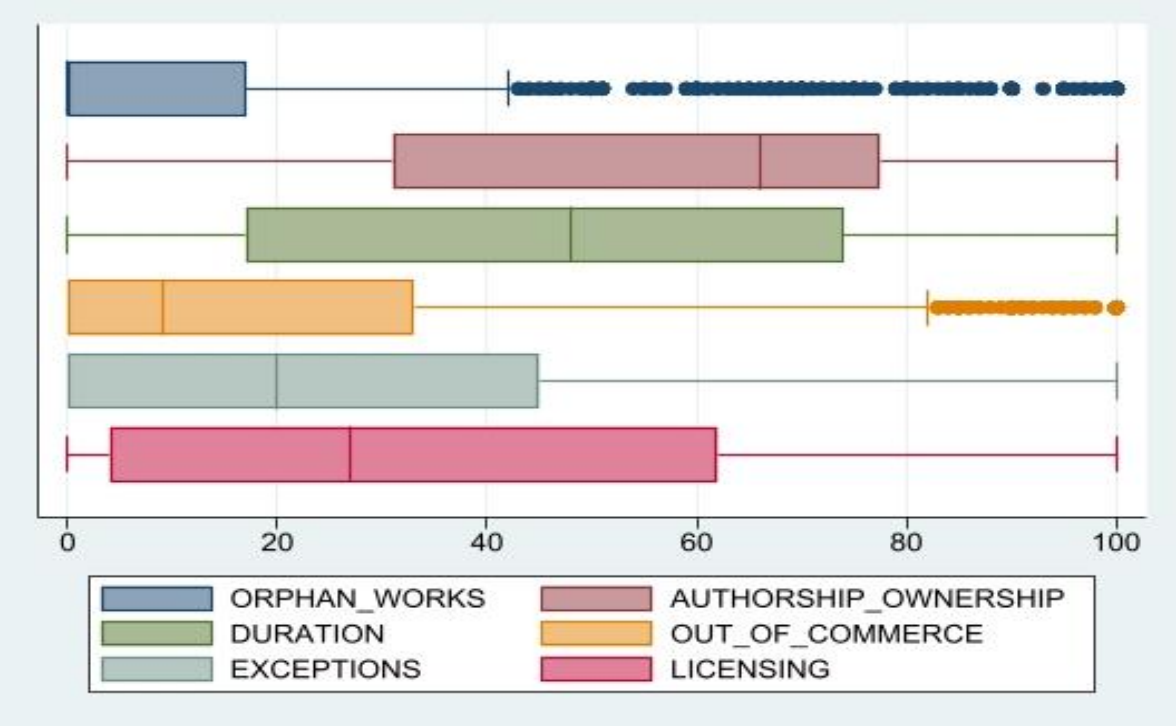

Figure 6 Boxplot on respondents' knowledge about different aspects of copyright law. The question was "In general, how familiar are you with the following areas of copyright law? [Please move the cursor to represent how much you are familiar, where 0 is not familiar at all and 100 is perfectly familiar.]"

Additionally, we asked two questions on their perception of copyright specific to journal articles. First, we asked *"In your opinion what should be the appropriate length for copyright protection of a scientific article?"*. Figure 7 (left-hand side) shows that our respondents appeared to be "against" the actual copyright duration of scientific articles. 68% answered that either copyright articles should not be protected by copyright (46%) or that their protection should last less than 2 years from the article's publication (23%). We further examined this with the question *"In your opinion, the Copyright Protection on scientific articles is morally a good or a bad thing."* Overall, 45% of respondents answered that it is a morally bad thing, while for 18% it is neither a bad nor a good thing, and the remaining 37% believed that copyright protection on scientific articles is morally a good thing. Both questions on scientific articles' copyright highlighted that scholars are strongly opinionated on the subject and value knowledge diffusion over strong copyright protection. Overall respondents seemed to suggest a softer copyright protection based on a shorter duration – the value of a scientific article is in its novelty and thus it depreciates fast after all.

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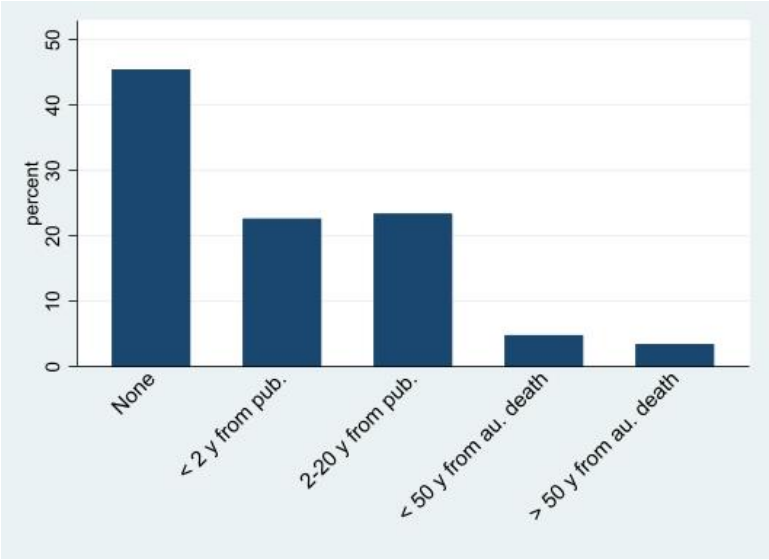

Figure 7 Perception on copyright duration on scientific articles. The question is "In your opinion what should be the appropriate length for copyright protection of a scientific article?".

3.1.6. Knowledge of Copyright Law and Exceptions

The perception of copyright might be subjective and hard to compare across individuals. Thus, beyond respondents' perception of copyright law we asked a series of questions "to test" their actual knowledge of it. This allowed us to answer R.Q.1 in a more objective way, directly assessing scholars' knowledge on the topic of copyright. We asked general questions on copyright length and copyright agreements, and specific ones related to scholars' work, focusing on teaching and research exceptions to copyright law. In Europe, copyright duration is 70 years after the death of the author, thus we asked our respondents *"According to the law in the country where you work, which is the length of copyright protection for scientific works?"*. Figure 8 shows that 62% of our respondents indicated the correct answer. Further, we showed our respondents 6 pictures of the Creative Commons copyright agreements (Figure 9 left-hand side) and we asked how many of them they knew. Figure 9 (right-hand side) shows a low knowledge, where 75% of respondents knew between 0 and 3 out of 6 agreements, and, in particular, 38% did not recognize any of those symbols. The answers to these two questions suggest a good general knowledge, but a low specific one, of copyright.

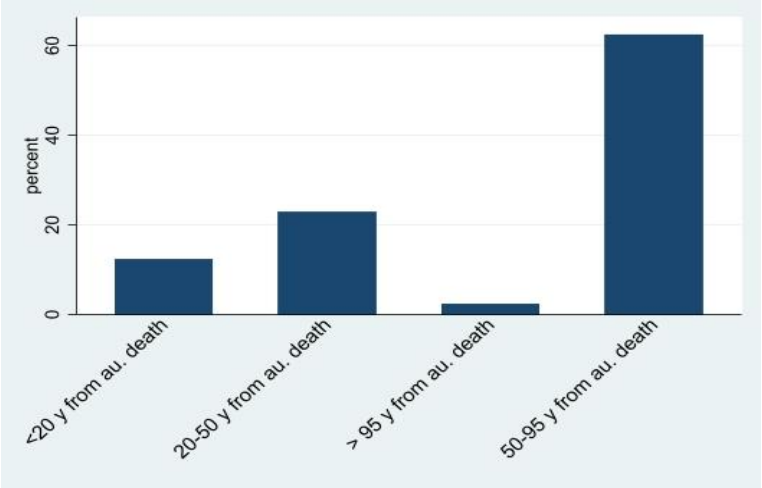

Figure 8 Knowledge of Copyright Length. The question is "According to the law in the country where you work, which is the length of copyright protection for scientific works?"

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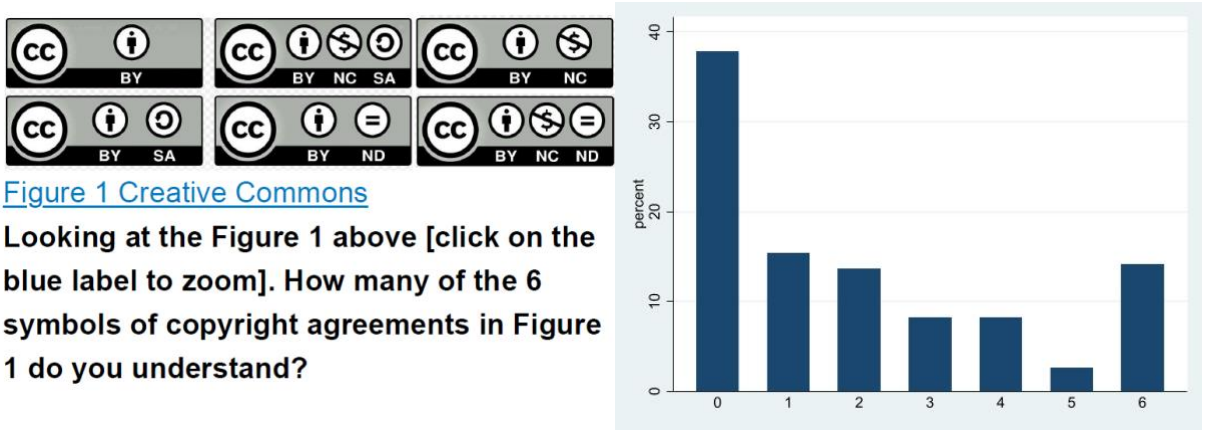

Figure 9 Knowledge of Creative Commons Agreements. The question is on the left and on the right respondents' answers.

The analysis of copyright perceptions shows that scholars perceive a low familiarity with copyright exceptions. This is quite surprising, since scholars often rely on copyright exceptions to do their job. In what follows, we try to disentangle whether the previous answer was due to the fact that *"copyright exception"* might be jargon and people might have knowledge thereof based on their day-to-day experience, without being aware of its formal definition. Thus, we asked practical questions to assess respondents' knowledge on research and teaching exceptions. Figure 10 (left-hand side) shows respondents' answers to *"The use of pirated software for research purposes is pretty common. How accurate or inaccurate is the sentence: Researchers can rely on copyright exemptions even while using pirated software"*. We can observe that 61% of respondents answered correctly, indicating the sentence as *"inaccurate"* or *"strongly inaccurate"*. Further, figure 10 (right-hand side) shows respondents' answers to the question *"How accurate or inaccurate is the sentence: Academics never need to ask permission from the copyright holder when they use materials of third parties for teaching or research purposes"*. Here the percentage of right answers are lower, where 57% of respondents answered correctly with *"inaccurate"* or *"strongly inaccurate"*.

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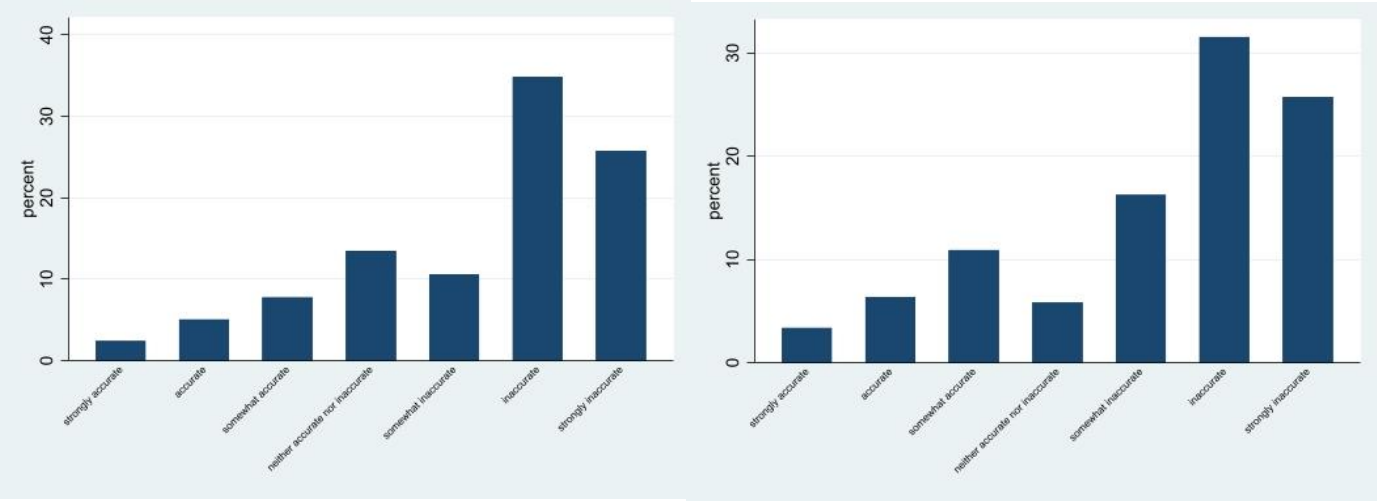

Figure 10 Research exceptions. Left plot question is "The use of pirated software for research purposes is pretty common. How accurate or inaccurate is the sentence: Researchers can rely on copyright exemptions even while using pirated software". Right plot question is "How accurate or inaccurate is the sentence: Academics never need to ask permission from the copyright holder when they use materials of third parties for teaching or research purposes".

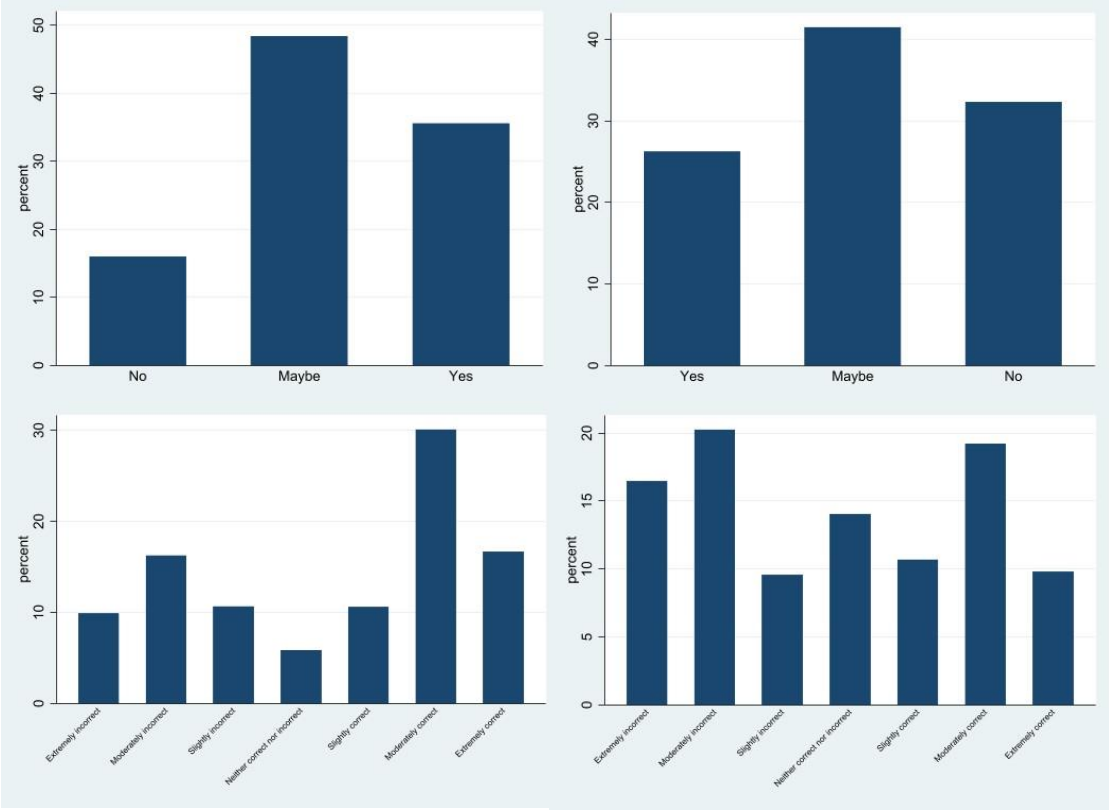

Figure 11 Teaching Exceptions, Quotation, and Text-Mining. Top-Left question is "Do you need to ask permission from the journal to post a copy of a published article on the web page of the course you are teaching?". Top-Right question is "Do you need to ask permission to the journal or to the author to share in a password-protected platform (like e-learning) accessible only to students a published article?". Bottom-Left question about quotation is "To cite a part of the text from another scientific article is a common practice. The following sentence is correct or incorrect to your knowledge: There is no length limit to a quotation for criticism purposes if the quotation is required for the specific purpose and the author source are indicated". Bottom-Right question on text-mining is "Text and Data Mining are becoming an important source of information for research purposes. The following sentence is correct or incorrect to your knowledge: Text and Data Mining for research purposes can be used for research purposes pursued on material protected by copyright without the need for prior authorization and without compensating the copyright holders"

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In Figure 11 we show responses on more specific aspects of teaching exceptions, quotation practises, and text mining. In figure 11 (top left-hand side), we show that 36% of respondents answered correctly, *"Yes"*, to the question *"Do you need to ask permission from the journal to post a copy of a published article on the web page of the course you are teaching*?", while the number of correct answers were lower (32% answered *"No"*) to the more specific question on teaching exceptions, which was *"Do you need to ask permission to the journal or to the author to share in a password-protected platform (like e-learning) accessible only to students a published article?"*. To assess scholars' knowledge of copyright law that concerns text quotation we asked *"To cite a part of the text from another scientific article is a common practice. The following sentence is correct or incorrect to your knowledge: There is no length limit to a quotation for criticism purposes if the quotation is required for the specific purpose and the author source are indicated".* Responses reported in Figure 11 (bottom left-hand side) show that 57% of our sample answered correctly in stating that the sentence is correct. Concerning the question on the research exception for text-mining, *"Text and Data Mining are becoming an important source of information for research purposes. The following sentence is correct or incorrect to your knowledge: Text and Data Mining for research purposes can be used for research purposes pursued on material protected by copyright without the need for prior authorization and without compensating the copyright holders",* only 40% of respondents answered correctly that the sentence is correct. Overall, the knowledge of research exceptions is in general higher than the knowledge of teaching exceptions, indicating that scholars might be more sensitive to issues related their research. The lack of knowledge on work-related copyright issues and exceptions might relate to the fact that often training on copyright subjects is low at universities. Only 40% of our sample received guidance and advice of rules related to copyright law and their work at universities.

3.1.7. Channels Used to Access Scientific Articles

After assessing scholars' knowledge and perception of copyright law, we investigated the channels used to access scientific articles, to answer the set of R.Q.2. In in this section, we focus on scholars' use of the Shadow Library website, Sci-Hub. Table 1 shows the distribution of Sci-Hub users across countries and scientific disciplines. Overall, 47% of respondents have used Sci-Hub in the past. The country with the lowest usage is Sweden, where only 32% of respondents have used Sci-Hub, while Hungary has the highest number of Sci-Hub users, where the platform is used by the 65% of respondents. Looking across disciplines, the differences are lower compared to country differences, with almost all fields displaying a similar usage of the platform. This suggests that differences across university systems are more important in explaining the use of Sci-Hub than field differences.

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		USE_SCI_HUB				
		Total		No		Yes
	N	Row%	N	Row%	N	Row%
	Country					
GERMANY	460	16%	234	51%	226	49%
HUNGARY	173	6%	60	35%	113	65%
IRELAND	292	10%	174	60%	118	40%
ITALY	951	33%	452	48%	499	52%
NETHERLANDS	421	15%	203	48%	218	52%
SWEDEN	552	19%	378	68%	174	32%
	ERC fields					
LS	509	18%	268	53%	241	47%
PE	813	29%	371	46%	442	54%
SH	1188	42%	686	58%	502	42%
PE.LS	88	3%	48	55%	40	45%
PE.SH	126	4%	51	40%	75	60%
PE.SH.LS	22	1%	9	41%	13	59%
SH.LS	78	3%	48	62%	30	38%
Total	2849	100%	1501	53%	1348	47%

Table Sci-Hub users by country and scientific discipline. The question is "Have you ever used online platforms or databases like SCI-HUB, Z-Library, or Library Genesis (LibGen)".

Further, we investigated the intensity in Sci-Hub usage, asking to the 45% of those who used it *"How many times did you use platforms or databases like SCI-HUB, Z-Library, or Library Genesis (LibGen) in the last year?"*. Figure 12 shows that the 95% used it at least once in the last year and among those 45% used it more than 10 times last year. This suggests that most of the Sci-Hub users are frequent users.

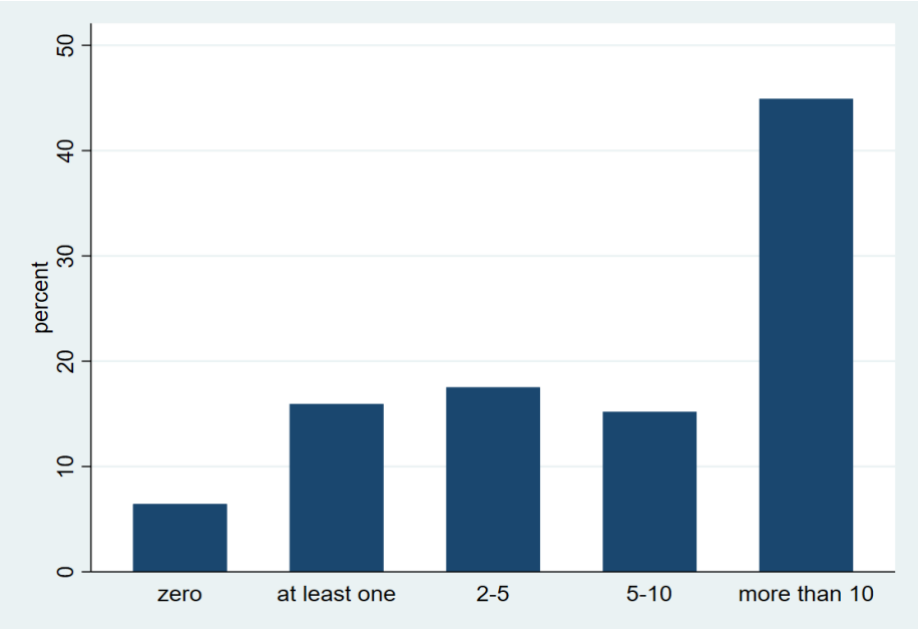

Figure 12 Intensity in Sci-Hub usage in the last year

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To investigate the reasons why scholars used Sci-Hub, we asked them why they used it. In this respect the trivial explanation of why scholars use Sci-Hub is that they lack access to the scientific literature. Figure 13 shows that a lack of access to scientific literature it is not the primary motive for using Sci-Hub. 53% of respondents indicated that they used it to complement the journal access of their library, 40% used it because it is convenient and saves time, 37% indicated a lack of access to the literature, 27% indicated the high cost of articles as a motive for using Sci-Hub, and 24% used it to boycott large academic publishers such as Elsevier and Springer.

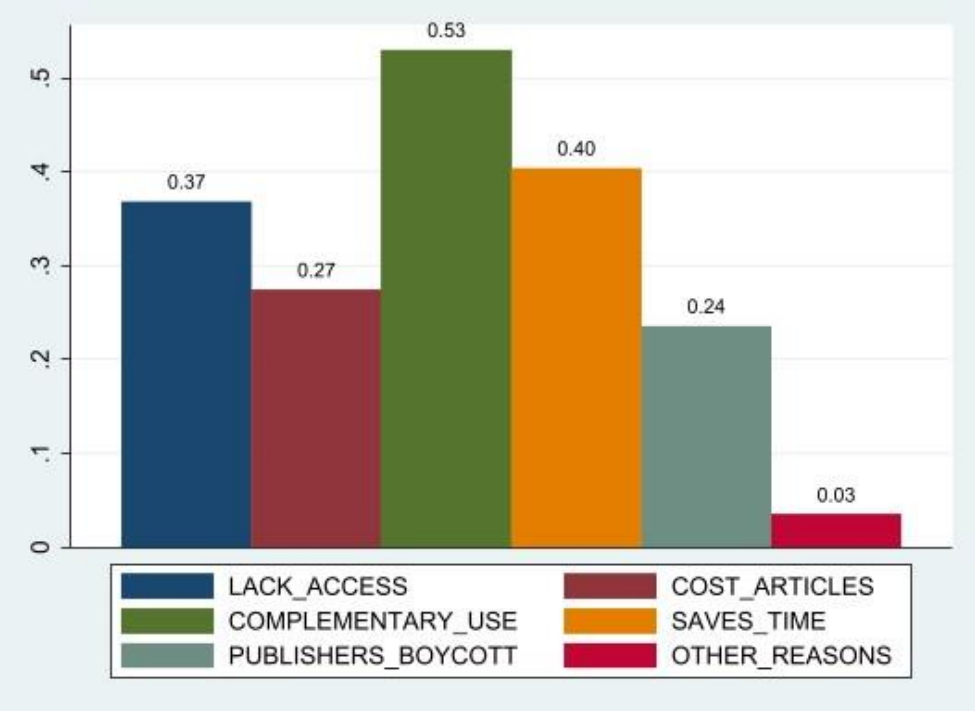

Figure 13 Motives of Sci-Hub usage. Multiple choice question reporting 6 possibilities. We then encode each item as a dummy variable, and we show the averages.

After looking at the descriptive evidence on the use of Sci-Hub we tested the 7 sub-research questions stated above. Figure 14 shows the results, while the complete regression table is found in the appendix, Table 3. Overall, we found support for most of our hypothesis, confirming most of the literature's results. We found support for R.Q.2.1 in finding that the knowledge on the law is an important determinant. However, the literature often finds a negative relationship, where the higher the knowledge of the law is, the lower the probability is of breaking it. Instead, we found the opposite, the higher the scholar's knowledge of Creative Commons journals agreements, the higher the probability that she/he uses Sci-Hub. This might connect to the fact that scholars who know journal agreements are more sensitive to issues related to Open Science and might be against strong copyright protection on journal articles. Indeed, the creative commons organization is a movement among individuals dissatisfied with ordinary copyright. Moreover, the creative commons agreements are a crucial aspect that relates with for academic piracy. Those with a good knowledge of copyright are also more able of avoiding negative consequence while doing piracy. Therefore, this variable captures also some aspects of the individual control ability, and, in this respect, the sign of the coefficient is expected to be positive.

Related to R.Q.2.2, we found that demographic characteristics matter. We found that certain faculty members are less likely to use Sci-Hub, and this relates to both age and status. Indeed, younger individuals

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are more involved in digital piracy and with respect to status, people with a high academic rank might be less likely to do the literature review for papers co-authored with younger scholars. Additionally, we find that scholars with a foreign nationality are more likely to use Sci-Hub, and this might relate to the fact that piracy enforcement differs from country to country, and such platforms are more popular in emerging economies. R.Q.2.3 examines the relation between the morality of the individual and her/his behaviour towards piracy. We found that the higher the moral justification in doing piracy is, the higher the probability of using Sci-Hub is. Additionally, we found that those who think that the business model of the academic publisher is strongly unethical are also more likely to use Sci-Hub. This suggests that not only the morality of the individual, but also her/his perception of (un)fairness in the academic publishing system, is connected to the use of the Sci-hub platform. We found the importance of reinforcement mechanisms, supporting R.Q.2.4. Individuals that are likely to have indulged in pirating activity while students are more likely to use Sci-Hub. According to the expected utility theory, the quality of the genuine product should reduce the likelihood of using the pirated one. Testing this theory in R.Q.2.5, we found that that the more scholars are satisfied by the library services of their university, the lower the probability is of their using Sci-Hub. Further, we tested whether institutional norms relate to scholars' use of Sci-Hub, in R.Q.2.6. Here we found no support for our hypothesis. Having received institutional training on copyright law does not affect the probability of using Sci-Hub. In contrast, having a heavy teaching-load does. This might mean that people experiencing teaching overload try to save time when doing literature research. They might look for short-cuts and faster ways to access the literature they need given their time constraint. Our last hypothesis, R.Q.2.7, tested whether the social environment might matter in explaining the use of the platform. In this respect we found that it does; scholars are more likely to use Sci-Hub if their colleagues are circulating, without permission, copies of material protected by copyright.

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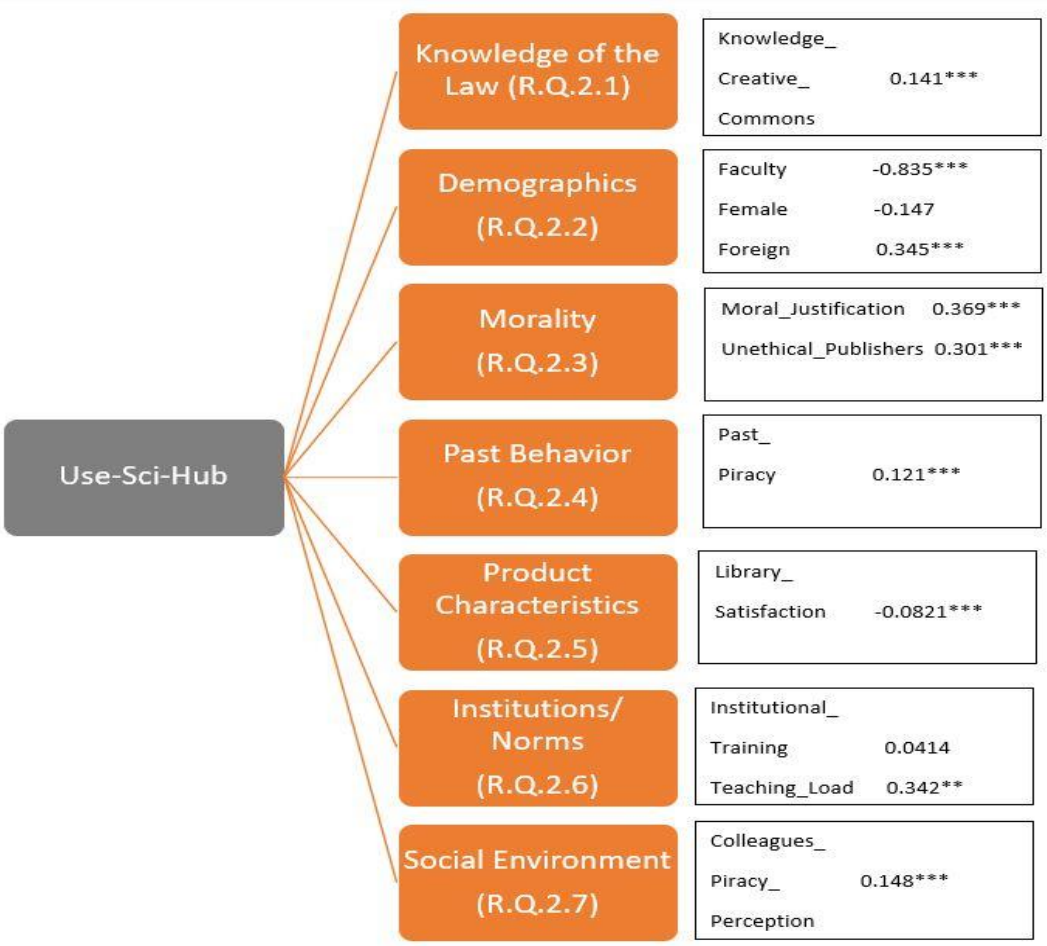

*Figure 14 Test of the sub-questions of R.Q.2. Determinants of the use of Sci-Hub. Results are from a logistic regression with robust standard errors where the dependent variable is the dummy equal to one if respondent used Sci-Hub and 0 otherwise. Number of observation is 2701 additional controls are Country dummies, ERC scientific discipline dummies, and University dummies. The complete regression table is in table 3 in the appendix. Significance codes are *p<0.1, **p<0.05, *** p<0.01*

3.1.8. Conclusions on Case Study 1

The empirical analysis of academics found that academics are strongly opinionated about journal copyright agreements and in general advocate for a short and soft protection, rather that the complete abolishment of copyright protection. In terms of knowledge of copyright law, scholars show a good general knowledge of copyright law, but they lack a specific one. In particular, they display only a limited knowledge of teaching and research exceptions. This might relate to the fact that EU legislation is complex, stratified and fast evolving. It appears evident that the recent engagement of the EU on the teaching exception for online learning and research exception for text-mining was not known by the scientific community.

Focusing on the channels used to access academic journals we found that less than half of our sample used pirated platforms like Sci-Hub. The use of such “illegal” channels goes beyond a lack of access to the literature and it is motivated both by practical reasons (the platform is “better” or handier than their library services), or by a sort of conscious or unconscious reaction to a system of academic publishing which is considered to be unethical and unfair.

3.1.9. Limitations

The potential limitations of case study 1 are the following:

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- Sampling strategy – Given time constraints related to the project, we collected email addresses from the top 5 universities in 6 countries. This sub-sample of 30 universities could not be representative of all academics in the EU and represents an elite part of the higher education system. Universities of lower rank might behave differently.
- Response rate – We oversampled the population of scholars working at the selected 30 universities. This happened because were not able to eliminate from our email list the purely administrative staff, and this group was no prone to answer our survey. To minimize the potential harm of contacting administrative staff not involved in teaching/ or research activities, we had a filtered-out option in our survey. However, most of the administrative personnel contacted did not answer our survey at all. This makes the actual response rate hard to compute, and we provided a lower-bound estimation for precautionary reasons.
- Biases in respondents – Since our survey was not mandatory and individuals could decide whether to answer or not, we acknowledge that certain groups might have been more motivated than others to answer our survey. We might have oversampled individuals particularly sensitive to copyright issues.
- Biases in responses – As our survey asked about the use of Sci-Hub and other products who violate copyright law, respondents might not have answered honestly and under-reported their actual behaviour.

3.2. Case Study 2: Methodology and Results

3.2.1. Desk Based Research and Empirical Research

Our theoretical framework for answering the research questions of case study 2, highlighted above, builds upon legal literature on copyright, but also disability law literature, and is informed by a human rights approach to disability. Alongside the review of relevant EU studies and grey literature, scholarly works, the sample countries' legal systems and their copyright laws were investigated to refine the survey questions and were used to support the analysis of data stemming from the survey.

3.2.2. Research Design

As discussed in the interim report D2.5, the overall goal of subtask 2.5.1. is to provide empirical evidence on the perceptions that people with visual impairments have of copyright law and their preferred channels of access to printed material. In line with that goal, our survey included 24 main questions that have helped us shed light on how the Marrakesh exception has been applied and whether it has improved access for a specific cohort of persons with disabilities, i.e. persons with visual impairments. Following the research questions, this survey was used to ascertain participants' attitudes, beliefs and opinions, or the reporting of their experiences and/or behaviours, in accessing printed material.

In particular, the survey included forced-choice questions, leading respondents to choose from a range of selected response options. The forced-choice questions had multiple-choice, dichotomous questions and, Likert scales (see Annex 2A). Respondents had the opportunity to raise issues that are of importance to them through specific open-answer options, to capture different dimensions of accessibility and the role of copyright law. We did not use open-ended questions as a main source on the survey for two reasons. First, there is anecdotal evidence that respondents tend to skip such questions, raising a problem of response bias and missing data. Secondly, open-ended questions require a wider timeframe for coding and analysis, which was not appropriate for the project (Vogt et al. 2014).

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The survey included initial demographic questions related to gender, year of birth, level of education etc., as well as questions related to internet access and use of assistive technology. It then collected data around channels of consumption of accessible material, and knowledge and perception of copyright law (Figure 15).

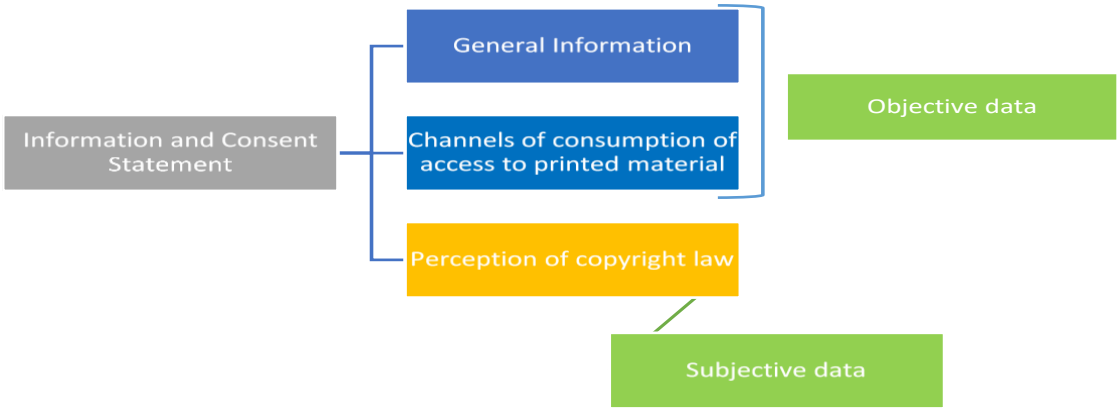

Figure 15 Chart displaying the objective and subjective characterization of Data around channels of consumption of accessible material, knowledge, and perception of copyright law

3.2.3. Data Collection

The survey was made accessible in the six selected countries' official languages[27] and was administered online through Jisc Online Survey.

After having obtained ethical approval, the survey was launched on 8 September 2021. The survey targeted adults who are blind or have a visual impairment. Our recruitment strategy revolved around the support of 'gate-keepers', such as Universities' Access Offices and organizations representing people that are blind or visually impaired. We thus distributed and spread the survey invitations as widely as possible across the six selected countries. In particular, we used both traditional and Internet-mediated recruitment methods, stated below:

- Advertisement of the research survey and distribution to the EBU and their national members of the six selected countries (Table 7).
- Survey invitations distributed by the professional network of the Research team, Department of Law and *ALL Institute* at Maynooth University via e-mail.
- Survey invitations sent to Access offices of major universities in the countries considered.
- Research adverts placed on the social media of the Maynooth Research Team and *recreating Europe* project (Twitter, Facebook), using a targeted social media strategy, to support survey distribution.

Organisations and associations delivering the research invitation	**Mode of recruitment**	**Target population**	**Country to target**

[27] These are Dutch, English, Hungarian, Irish, Italian, German and Swedish.

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on behalf of Maynooth Research Team

German Federation of the Blind and Partially Sighted	Email mailing list	Blind and persons with visual impairments	Germany
German Centre for Accessible Reading	Email mailing list	Blind and persons with visual impairments	Germany
Hungarian Federation of the Blind and Partially Sighted	Email mailing list	Blind and persons with visual impairments	Hungary
National Council for the Blind of Ireland	Email mailing list	Blind and persons with visual impairments	Ireland
Voice of Vision Impairment	Email mailing list	Blind and persons with visual impairments	Ireland
Italian Union of the Blind and Partially Sighted	Email mailing list	Blind and persons with visual impairments	Italy
CBM Italia	Email mailing list	Blind and persons with visual impairments	Italy
Eye Association Netherlands	Email mailing list	Blind and persons with visual impairments	The Netherlands
Royal Dutch Visio	Email mailing list	Blind and persons with visual impairments	The Netherlands
Swedish Association of the Visually Impaired	Email mailing list	Blind and persons with visual impairments	Sweden

Table 2 Members of EBU

Creating an accessible and inclusive digital environment is one of the core principles of this research project. Given that the survey was targeted to persons with visual impairments, accessibility was our highest priority. Before launching the online survey, and building on the work done under Task 2.2, we made sure to comply with most recent web accessibility standards and best practices on accessibility, in line with the Web Accessibility Directive (WAD). Following consultations with different accessibility experts and the Maynooth Access Office, alongside that which was already done within the remit of Task 2.2, we created additional versions of the survey in accessible Word-formats to ensure that everyone had the opportunity to participate on an equal basis with others. Additionally, our survey received ethical approval by Maynooth University on the 30 June 2021.

3.2.4. Demographic Characteristics of the Sample

In this section we examine the demographic characteristics of the data collected for Case Study 2.

We collected 201 responses, and among them the 74% were from Italy[28], 14% from Germany, 5% from Sweden, 3% from Hungary, and 1% from Ireland. Unfortunately, we collected only 1 response from The

[28] The higher number of collected responses from Italy is because 1) Italian blind unions were more responsive and; 2) the social network of the research team comprises many Italians.

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Netherlands. The poor participation rates in some of the selected countries and the significant disparity in participation did not allow for a cross-country comparison.

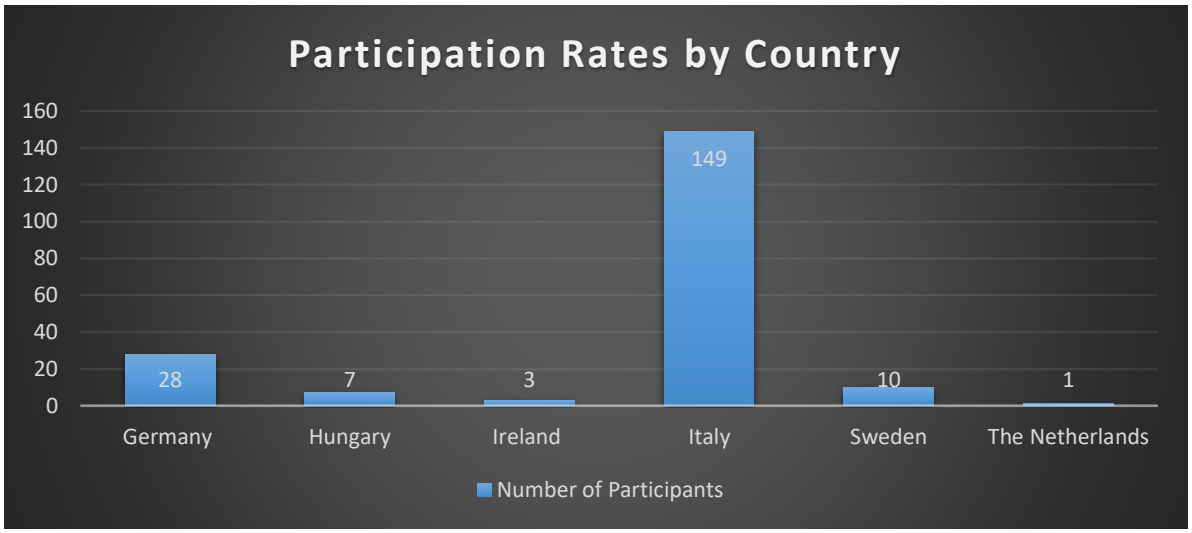

Figure 16 Total number of survey respondents per country.

There was a fairly equal dichotomous-gender balance among respondents, with 48% identifying as female and 50% identifying as male. Just 1% identified as non-binary, and 1% were 'unspecified' (Figure 17). Respondents were equally distributed in terms of the type of impairment; 55% of respondents were persons who are blind and 45% of respondents were persons with a visual impairment.

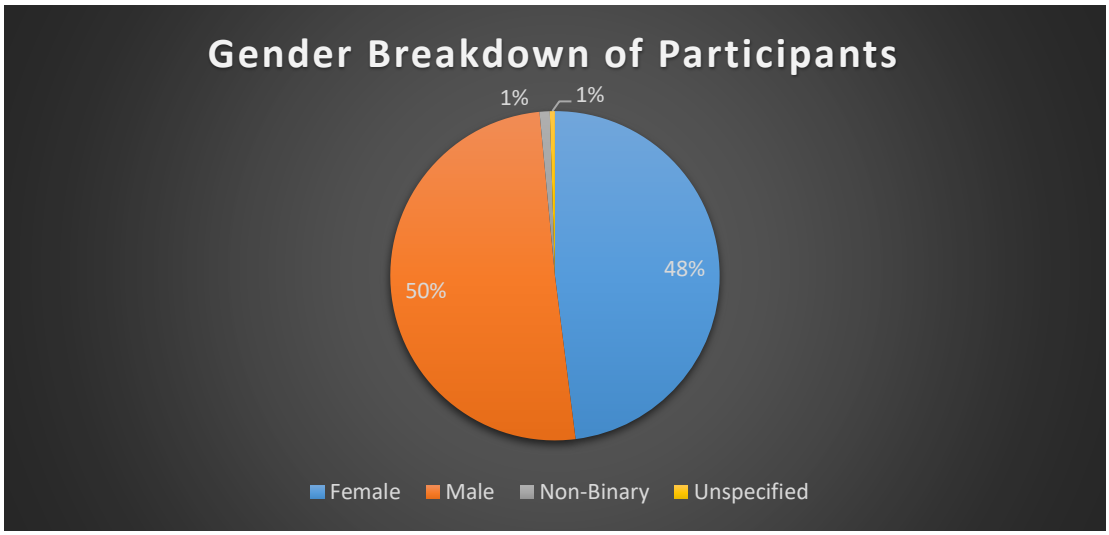

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Figure 17 Gender breakdown of survey respondents

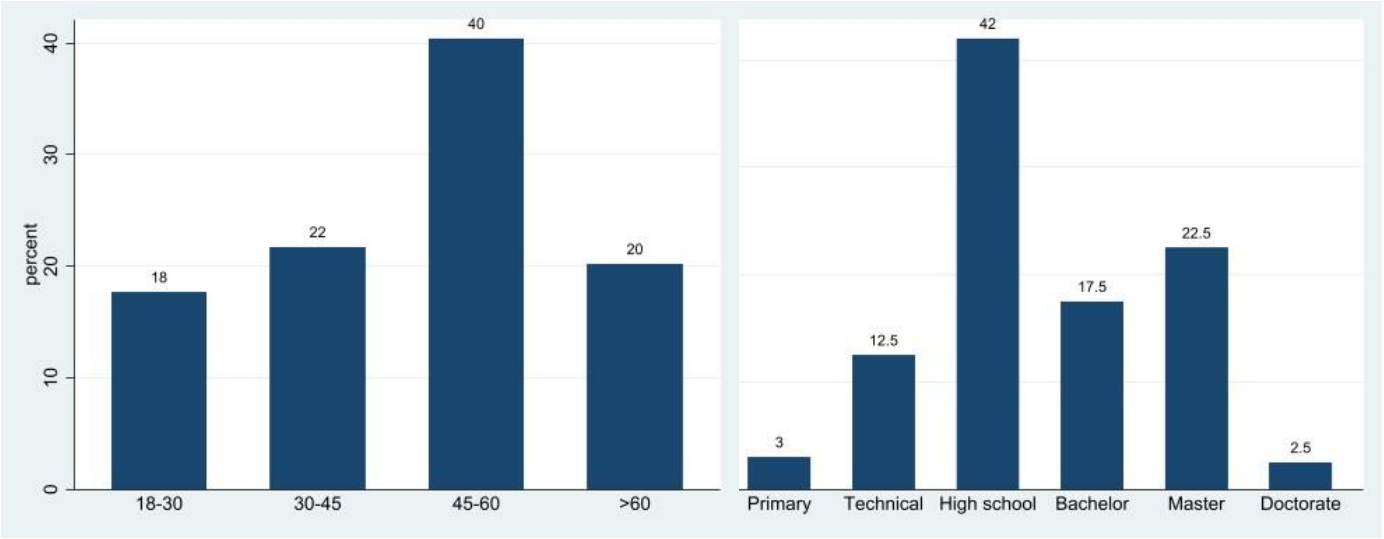

Figure 18 Distribution of respondents by age (left) and education (right)

Variable	N.	Mean	Std. dev.	Min.	Max.
EDUCATION	200	3.515	1.134	1	6
FEMALE	201	0.473	0.500	0	1
AGE	198	2.631	0.998	1	4
PERSON_WHO_IS_BLIND	201	0.552	0.499	0	1
SCREEN_READERS	201	0.692	0.463	0	1
SCREEN_MAGNIFIERS	201	0.299	0.459	0	1
TTS (text-to-speech)	201	0.463	0.500	0	1
BRAILLE_PRINTERS	201	0.109	0.313	0	1
ACCESS_WITH_THIRD_PARTY	201	0.562	0.497	0	1
KNOWLEDGE_COPYRIGHT	199	2.281	0.927	1	5
KNOWLEDGE_MARRAKESH_TREATY	197	1.761	0.920	1	3
ACCESS_IMPROVEMENTS_LAST_YEARS	197	2.294	0.848	1	3

Table 3 summary statistics of survey variables

3.2.5. Perception of Copyright Law

In this section we examine the perception of the knowledge of the copyright law, in answer to R.Q.1. The first variable was visually impaired persons' perception of their knowledge on copyright law. In the survey we asked the following *"How knowledgeable are you of European Union laws and national laws on copyright?"*. The respondents had 5 options to answer, ranging from 1 *"not knowledgeable at all"* to 5 *"extremely knowledgeable"*.

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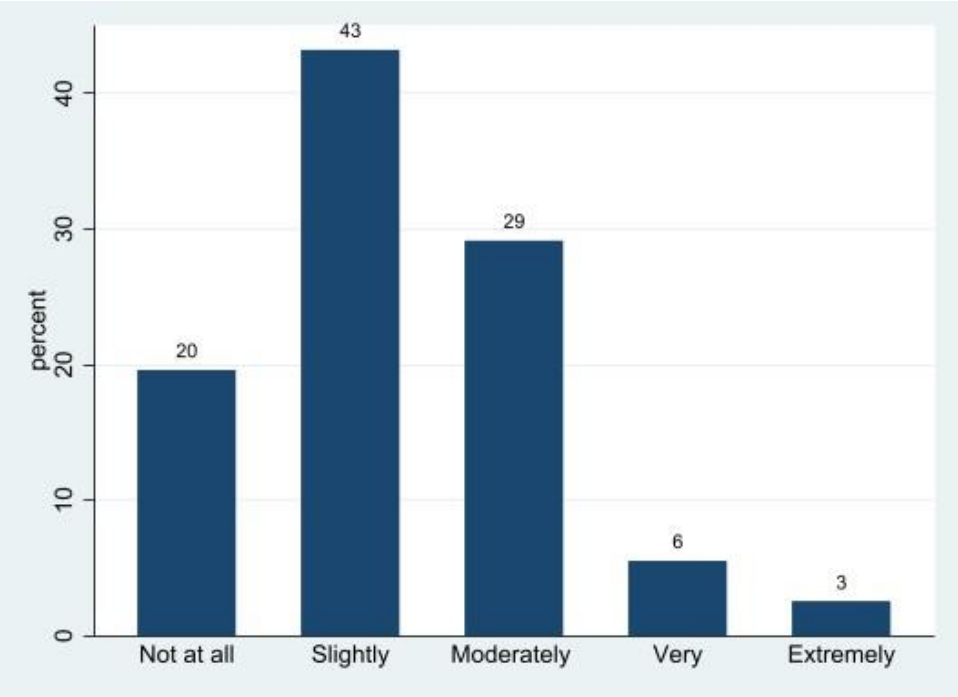

Figure 19 Perception of knowledge of copyright law

Figure 19 shows that the 63% of respondents had a low knowledge of copyright law and reported either that they are not knowledgeable at all or that they are slightly knowledgeable. Moreover, less than 10% of respondents reported a high knowledge (very knowledgeable or extremely knowledgeable) of national copyright law.

R.Q.1.1 asks whether visually impaired persons' knowledge of copyright law relates to demographic characteristics. Figure 20 shows that more educated people are more likely to have a higher perception of copyright knowledge. Unsurprisingly, people who indicated being *Very* and *Extremely Knowledgeable* have an average education level above the Bachelor Degree. The correlation between the two variables is 0.27 (p-value = 0.0001). In contrast, there is no correlation between knowledge perception of copyright law and other demographic characteristics such as being female (cor=-0.06, p-value=0.38), age (cor=0.004, p-value=0.95) or impairment type (cor=0.09, p-value=0.2).

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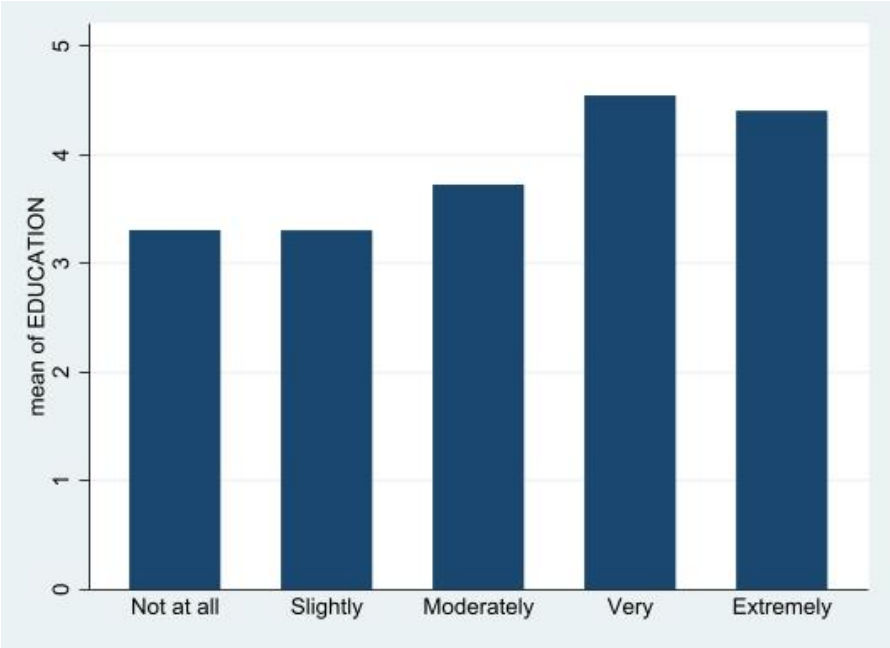

Figure 19 Mean of Education level by Knowledge of Copyright. Education levels are 1=Primary School; 2= Technical/Vocational; 3=High school; 4= Bachelor Degree; 5=Master Degree; 6=Doctorate.

3.2.6. Knowledge of the Copyright Exceptions provided for in the Marrakesh Treaty

The research question R.Q.1.2 asks whether respondents identifying as VIPs know of the Marrakesh Treaty and whether it is considered a "game changer" to make the access to printed material easier for VIPs. In this case we asked, *"Do you know what the Marrakesh Treaty provides for?"* and we give three ordered response options: 1. *"No"*, 2. *"Don't Know"*, and 3. *"Yes"*. Figure 21 shows how the responses were distributed. Only 1 in 3 respondents had a knowledge of the Marrakesh Treaty and almost 60% had no knowledge of the provision of the Marrakesh Treaty. This suggests that VIPs are not aware of copyright exceptions designed for them.

The data somewhat confirm the data gathered through the qualitative interviews carried out in Task 2.2. In the context of the qualitative research undertaken, some participants did indicate that copyright may constitute a barrier for persons with disabilities, in particular people who are blind or visually impaired, to access printed material. However, while they showed some awareness of the Marrakesh Treaty, interviewees made evident the existence of a rather patchy knowledge of the Marrakesh Treaty itself, and a very limited knowledge of the overall role of the EU in implementing this Treaty.

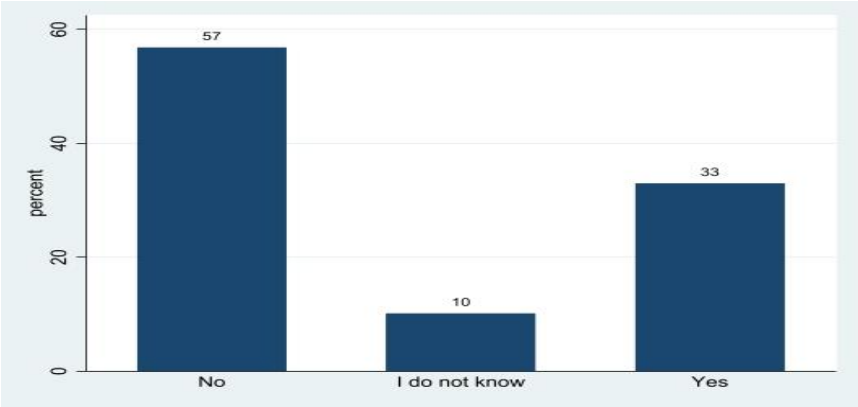

Figure 20 Distribution of Knowledge of the Marrakesh Treaty

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To test whether the Marrakesh Treaty is perceived as a game changer, we asked one direct question and one more lateral question. First, we asked "*In your opinion and, on the whole, are current copyright laws and exceptions for persons with visual impairments adequate to protect the rights of persons with visual impairments to access cultural materials?*". Figure 22 shows that only 23% of respondents considered the VIP copyright exception as positively impacting their right to access cultural materials.

Additionally, we asked whether they experienced an access improvement in the last year. Given that the Marrakesh Treaty was implemented the Marrakesh Directive and Regulation[29], and the Directive had to be transposed into national law by 11 October 2018, while the Regulation entered into force on the 12 October 2018, we aimed to test whether the Marrakesh Treaty and its implementing legislation in the EU has displayed a positive effect on accessibility of printed material. The perception of access improvements is higher. Figure 23 shows that the 55% thinks that its access has improved in the last year.

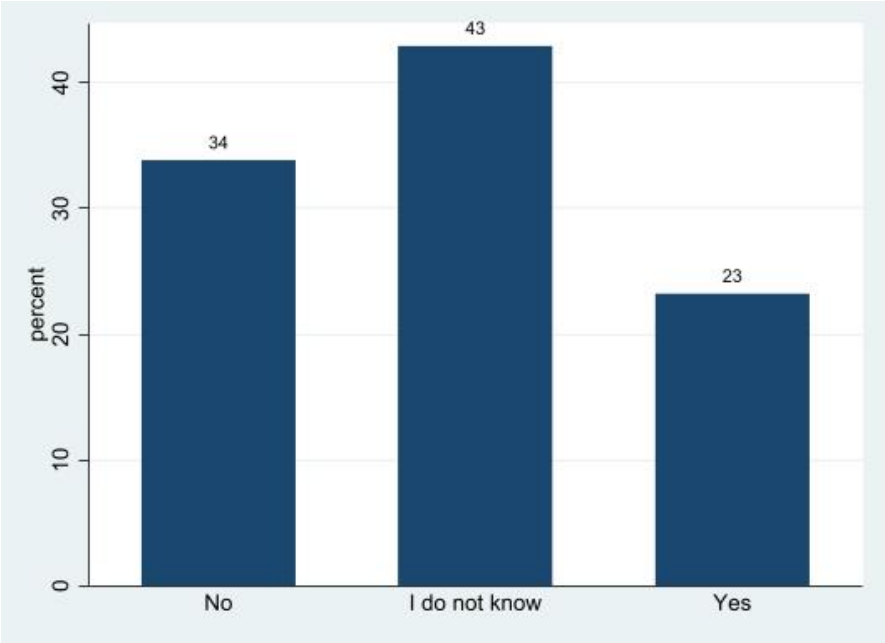

Figure 21 Satisfaction of copyright exception. Answers to the question " In your opinion and, on the whole, are current copyright laws and exceptions for persons with visual impairments adequate to protect the rights of persons with visual impairments to access cultural materials?"

[29] *Supra* nt. 4.

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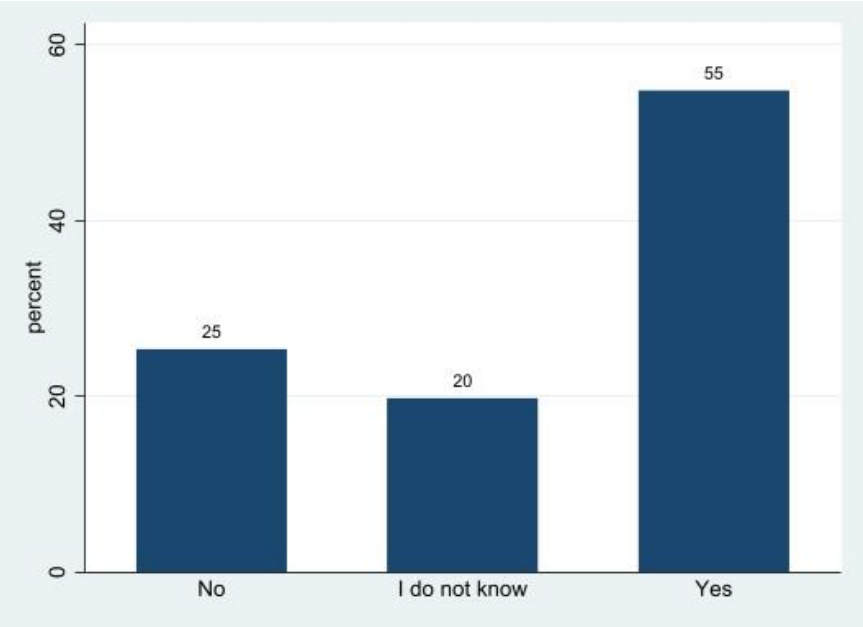

Figure 22 Distribution of Access to printed materials improvements in the last years.

3.2.7. Channels Used to Access Printed Materials

The last question, R.Q.2., examines the channels and barriers to access to printed materials, to verify the use what technologies are most used to convert printed material in accessible formats (e.g. screen readers and screen magnifiers) and/or to create accessible copies. We included a range of technologies, including assistive technologies that are now embedded in mainstream digital devices.

Looking at respondents' channels for accessing printed materials, Figure 24 shows that 70% of our respondents use screen reader technology, 30% a screen magnifier[30], 46% a Text-to-Speech (TTS) technology, and 10% use a Braille printer.[31] Our survey did not, however, investigate the use of those technologies *per se*. Existing research has already discussed the use of screen readers (WebAIM, 2019).

[30] A screen magnifier enlarges the texts and graphics on a computer screen. Usually screen magnification options are in-built into computer options.

[31] Braille printers usually entail a translation software that converts printed material in electronic format into Braille and braille embosser to produce materials in hard copy braille.

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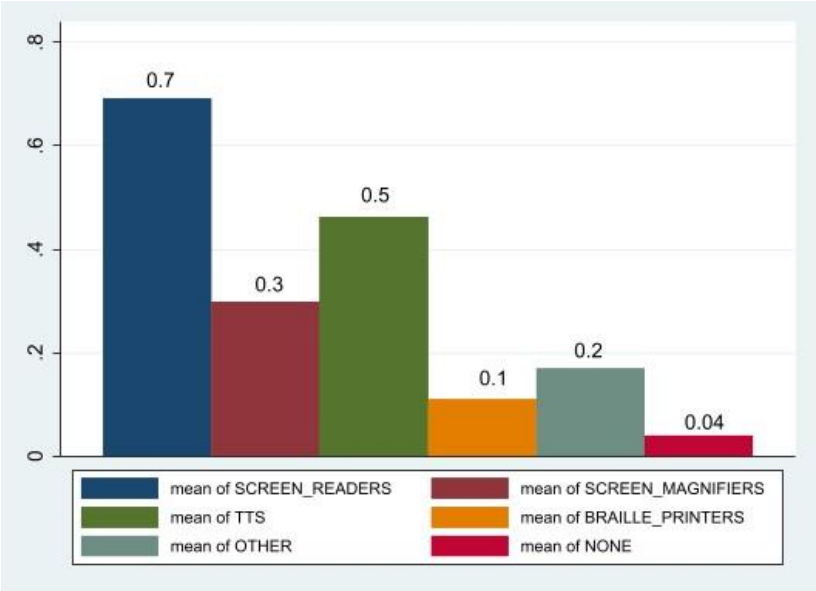

Figure 23 Technology used by VIPs

Notably, screen readers are software programs that allow people who are visually impaired to listen to audio of texts displayed on the screen with a speech synthesizer. A screen reader is a software application that identifies and interprets the words. The interface operates with text-to-speech, sound icons, or Braille output devices. Our survey confirms anecdotal evidence that screen readers are the primary means of accessing online text by visually impaired persons.[32] This is also because the usage of screen readers is not limited to computers, as smart phones have inbuilt screen readers. Further, both Android and Apple devices include text-to-speech programs.

Additionally, more than half of our sample (56%) access reading materials facilitated by a third party (e.g., organization, service provider, or community library). In this respect, it may be noted that usually Braille printers are used by organizations and educational institute and can use those to produce Braille materials.

Additionally, we assessed the barriers to access faced by persons with visual impairments relating the previous question, that tests indirectly the perceived benefits from the Marrakesh Treaty implementation (Figure 22) with individuals' characteristics. This allowed us to understand whether certain traits are associated with the experience of a larger benefit from the Marrakesh Treaty.

In Figures 25 and 26 we observe that people who are blind and Braille printer users were more likely to answer that they experienced an access improvement in the last years. This suggests that the perception of benefits experienced from the implementation of the Marrakesh Treaty is linked to the type of visual impairment (R.Q.2.1). In terms of specific channels (R.Q.2.2), the technology of Braille printer seems to correlate to the implementation of the Marrakesh Treaty, as this technology is used to make accessible copies of copyrighted works. However, in our sample only 10% of respondents used this type of technology, indicating that the lack of diffusion of Braille printers (and arguably of Braille language) may constrain the benefits of the Marrakesh Treaty for its beneficiaries.

[32] For example, number of Task 2.2 Interview participants talked primarily about the use of screen readers by visually impaired or blind persons to access digital cultural goods. See: EE_DIS; HRV_DIS; IE_DIS; MT_DIS.

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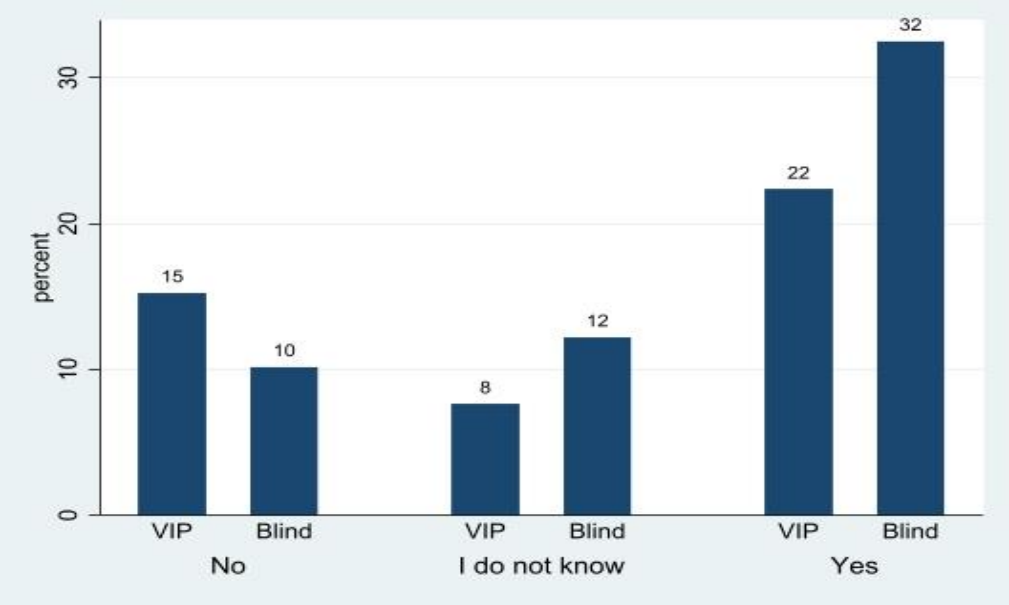

Figure 24 Distribution of access improvement in the last years across impairment type.

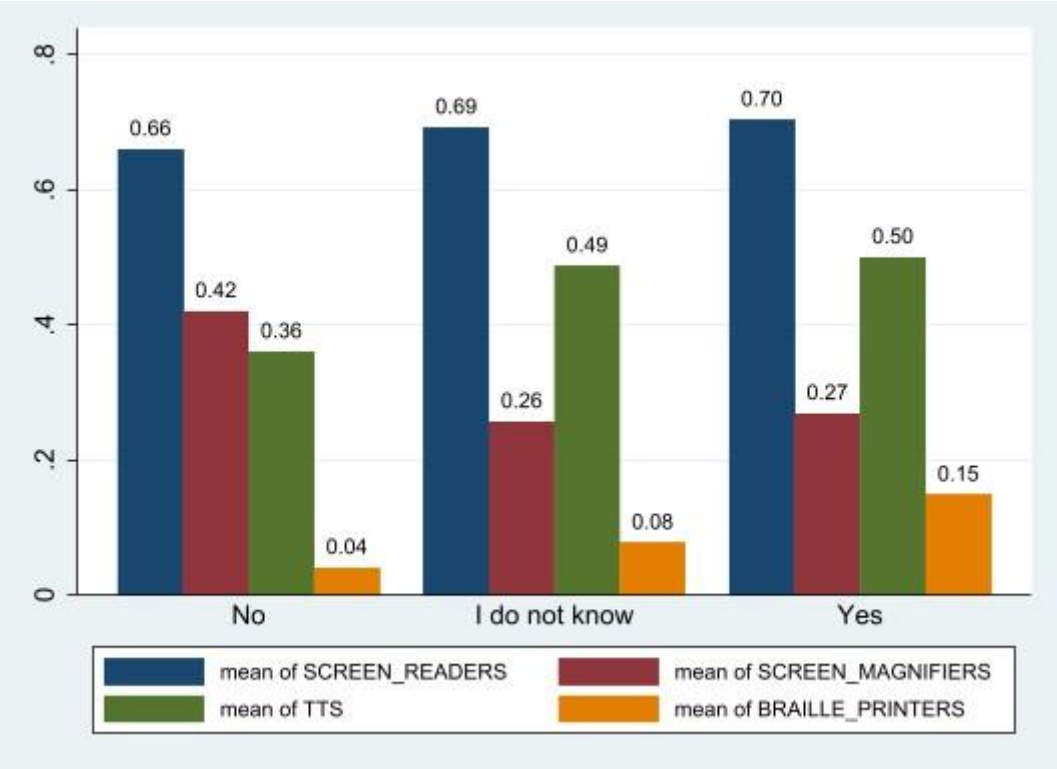

Figure 25 Distribution of access improvements in the last years across technology used

3.2.8. Conclusions on Case Study 2

The empirical analysis shows that persons with visual impairments have limited knowledge of copyright law and of the Marrakesh Treaty.

We found that access improvements have been experienced in the last year, and this may correlate to the wider copyright exception provided by the Marrakesh Treaty, as implemented by the EU and in the countries considered.

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We also found that limited use of Braille language and the associated technology (e.g. Braille printers) constitutes a barrier for further access improvements linked to the copyright exception provided for in the Marrakesh Treaty.

3.2.9. Limitations

The potential limitations of the case study 2 are the following:

- Response rate – We remark upon the limited scope of the sampling, which may be due to serval reasons, including 'survey fatigue'.
- Linguistic and Technological barriers – The questionnaire was available in the official languages of the sample countries and the survey was fully accessible. However, we estimate that technological barriers may still have prevented certain parts of the target population from undertaking the survey.

4. General Conclusions from the Two Case Studies

Task 2.5 encompasses two empirical case studies assessing the impact of regulatory responses to paradigmatic access issues: (i) academics and the research exception, and (ii) people with visual impairments and the so-called Marrakesh exception.

Digital technologies allow scholars to potentially access all prior existing knowledge. However, despite research and teaching exceptions, access to scientific materials remains extremely costly. The cost of scientific materials represents a barrier that might affect access to knowledge within the EU. This, coupled with the ongoing debate on publishers' business models, might affect academics' perception of copyright law and the channels used to access scientific knowledge in platforms such as Sci-Hub. Against this background, Sub-task T2.5.1 aims to provide empirical evidence on academics' perceptions of copyright law and their preferred channels of access to scientific knowledge using data collected through a survey in six European countries (Italy, Ireland, Sweden, Germany, Hungary, The Netherlands).

Copyright exceptions, now provided for in the Marrakesh Treaty, implemented into EU law by means of a Directive and Regulation, aim to enhance access to published works in accessible formats for people with visual impairments, blind persons and people that are otherwise print disabled. In the EU, the effects of the Marrakesh Treaty and of the domestic implementation of the Marrakesh Directive are, however, still unclear. In this respect, Sub-task T2.5.2. aimed to gather evidence about the actual channels of consumption of printed material used by persons with visual impairments, and their perception of copyright.

This final report has presented a detailed overview of the results of these two case studies. It has examined existing relevant literature that supports the analysis conducted, laid out the specific research questions, the methodology followed for the sampling, the data collection, and the empirical results. Overall, we found that individuals with paradigmatic access issues (i.e. academics and persons with visual impairment) have limited knowledge of copyright law and copyright exceptions. This lack of knowledge might be connected to the inherent complexity of copyright law and its evolving nature. It may be also linked to the absence of adequate awareness raising activities on copyright law and exceptions.

In terms of the preferred channels used to access digital cultural goods, scholars and persons with visual impairments seem to rely on tools or means that are most convenient, easier to use or reach. For some

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scholars Sci-Hub is handier than their library services, while persons with disabilities mostly use screen reading technologies, which are currently inbuilt in several devices. Ethical issues, like the perceived unfairness of the academic publishers' business models, appear to be critical points to be addressed in order to boost a more equitable diffusion of knowledge and culture.

For persons with visual impairments, most of the Marrakesh Treaty benefits appear to be linked to the possibility of having copies in Braille format. However, the cost of Braille printers or the limited Braille language education seems to constrain the benefits of the copyright exception.

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Annex 1 – Survey Case Study 1

A. Survey Academics and Sci-Hub- Final

Start of Block: Block 0: Demographic section

Q1.1

We are a research team from Sant'Anna School of Advanced Studies in Italy. This survey is part of the project *reCreating Europe* (https://www.recreating.eu/), funded by the European Commission under the H2020 Program.

Our research aims at understanding your views on how copyright law impacts your work as an academic. *Your participation in this survey is essential as it contributes to future policy design aimed at improving access and diffusion of scientific knowledge.*

Our survey will allow you to express your views about copyright, scientific publishers, and access to the scientific literature.

You are free to withdraw from the study at any time without giving a reason.

All information that is collected about you during the research is confidential. No personal information will be distributed to any other unauthorised individual or third party. Answers will be elaborated as aggregate and anonymised data for research purposes related to the project. If you want to know more about data treatment and GDPR please look at this link: Data processing and GDPR

Our research received the ethical approval from Scuola Superiore Sant'Anna Research Ethics committee (https://www.santannapisa.it/it/ateneo/comitato-etico-congiunto), you can contact them via email at comitatoetico@santannapisa.it. For any further information, or to withdraw your consent you can contact us at arianna.martinelli@santannapisa.it or giulia.rossello@santannapisa.it.Your input is very valuable for our project and it is a fundamental part of the project's successful development.

If you agree to take part in the study, please complete the CONSENT FORM IN THE NEXT PAGE

Page Break

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Q1.2

CONSENT FORM FOR RESEARCH PARTICIPANTS Below there is a list of conditions that we kindly ask you to read through. If you AGREE with all of these conditions, please SELECT YES. By selecting YES in this informed consent form YOU DO understand that you give your CONSENT to participate in the questionnaire, and in particular you know that:

Your participation in this reCreating Europe survey is voluntary.

You can decide to withdraw your participation at any time.

You are encouraged to ask questions about the project and your participation at any time.

Your personal data will be processed as stated in the privacy information. CONSENT:

- ○ YES, I would like to take part in this study (7)
- ○ NO, I would not like to participate (8)

Page Break

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Q1.3 Survey Introduction

Please answer honestly and read the questions carefully before answering. Anytime you don't know an answer, give your best guess. However, please be sure to spend enough time reading and understanding the question. To ensure the quality of our survey data, we will perform various statistical checks. Thus, responding without adequate effort may result in your responses being flagged for low quality. It is also crucial for our research's success that you complete the entire survey once you have started. Approximately, you will employ 15 minutes to complete our survey. The survey has different type of questions indicated in the following list.

- Single Choices -- it asks you to select one choice
- Multiple Choices -- it asks you to select one or more choices
- Drop Down menu choices -- it asks you to select one choice from the list of the dropdown menu
- Text -- it asks you to write your answer
- Slider Choices --it asks you to move the slide cursor to express a quantity

Page Break

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Q1.4 What is your gender?

- Male (1)
- Female (2)
- Non-binary / third gender (3)
- Prefer not to say (4)

Page Break

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Q1.5 What is your year of birth? Please enter your year of birth as a 4 digits number XXXX.

_____

Page Break

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Q1.6 What is your current job?

- ○ PhD student (1)
- ○ Post-Doc (2)
- ○ Assistant Professor (3)
- ○ Associate Professor (4)
- ○ Full Professor (5)
- ○ Administrative Staff (8)
- ○ Student (9)
- ○ Technician (10)
- ○ Prefer not to say (6)
- ○ Other (7) _____

Skip To: Q1.8 If What is your current job? != Administrative Staff

Page Break

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Q1.7 Does your work include a bibliographic search for projects or to support academic staff?

- ○ Yes (5)
- ○ No (6)

Skip To: End of Survey If Does your work include a bibliographic search for projects or to support academic staff? = No

Page Break

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Q1.8 Which is your nationality? Please select one from the list

▼ Afghan (1) ... Zimbabwean (221)

Page Break

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Q1.9 Please enter your main research interests as ERC categories [you can indicate more than one (Max 4)]

PE1–PE10 Physical Sciences and Engineering;
SH1–SH6 Social Sciences and Humanities;
LS1–LS9 Life Sciences
If you are not sure click here to see the sub-categories

☐ PE1 Mathematical foundations: All areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics and statistics (1)

☐ PE2 Fundamental constituents of matter: Particle, nuclear, plasma, atomic, molecular, gas, and optical physics (2)

☐ PE3 Condensed matter physics: Structure, electronic properties, fluids, nanosciences (3)

☐ PE4 Physical and analytical chemical sciences: Analytical chemistry, chemical theory, physical chemistry/chemical physics (4)

☐ PE5 Materials and synthesis: Materials synthesis, structure-properties relations, functional and advanced materials, molecular architecture, organic chemistry (5)

☐ PE6 Computer science and informatics: Informatics and information systems, computer science, scientific computing, intelligent systems (6)

☐ PE7 Systems and communication engineering: Electronic, communication, optical and systems engineering (7)

☐ PE8 Products and processes engineering: Product design, process design and control, construction methods, civil engineering, energy systems, material engineering (8)

☐ PE9 Universe sciences: Astro-physics/chemistry/biology; solar system; stellar, galactic and extragalactic astronomy, planetary systems, cosmology, space science, instrumentation (9)

☐ PE10 Earth system science: Physical geography, geology, geophysics, meteorology, oceanography, climatology, ecology, global environmental change, biogeochemical cycles, natural resources management. (10)

☐ SH1 Individuals, institutions and markets: Economics, finance and management (11)

☐ SH2 Institutions, values and beliefs and behaviour: Sociology, social anthropology, political science, law, communication, social studies of science and technology (12)

☐ SH3 Environment and society: Environmental studies, demography, social geography, urban and regional studies (13)

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☐ SH4 The Human Mind and its complexity: Cognition, psychology, linguistics, philosophy and education (14)

☐ SH5 Cultures and cultural production: Literature, visual and performing arts, music, cultural and comparative studies (15)

☐ SH6 The study of the human past Archaeology, history and memory (16)

☐ LS1 Molecular and Structural Biology and Biochemistry: Molecular biology, biochemistry, biophysics, structural biology, biochemistry of signal transduction (17)

☐ LS2 Genetics, Genomics, Bioinformatics and Systems Biology Genetics, population genetics, molecular genetics, genomics, transcriptomics, proteomics, metabolomics, bioinformatics, computational biology, biostatistics, biological modelling and simulation, systems biology, genetic epidemiology (18)

☐ LS3 Cellular and Developmental Biology: cell biology, cell physiology, signal transduction, organogenesis, developmental genetics, pattern formation in plants and animals (19)

☐ LS4 Physiology, Pathophysiology and Endocrinology Organ physiology, pathophysiology, endocrinology, metabolism, ageing, regeneration, tumorigenesis, cardiovascular disease, metabolic syndrome (20)

☐ LS5 Neurosciences and neural disorders Neurobiology, neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, neuroimaging, systems neuroscience, neurological disorders, psychiatry (21)

☐ LS6 Immunity and infection Immunobiology, aetiology of immune disorders, microbiology, virology, parasitology, global and other infectious diseases, population dynamics of infectious diseases, veterinary medicine (22)

☐ LS7 Diagnostic tools, therapies and public health Aetiology, diagnosis and treatment of disease, public health, epidemiology, pharmacology, clinical medicine, regenerative medicine, medical ethics (23)

☐ LS8 Evolutionary, population and environmental biology Evolution, ecology, animal behaviour, population biology, biodiversity, biogeography, marine biology, ecotoxicology, prokaryotic biology (24)

☐ LS9 Applied life sciences and biotechnology Agricultural, animal, fishery, forestry and food sciences; biotechnology, chemical biology, genetic engineering, synthetic biology, industrial biosciences; environmental biotechnology and remediation (25)

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Page Break

Q1.10 Which type of output is more valued in your field. Please choose only one

- ○ Research Article (1)
- ○ Book - Monograph (2)
- ○ Comment -Chapter in a collected volume (3)
- ○ Conference Proceeding (4)
- ○ Patent (5)

Page Break

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Q1.11 To which of the following statements you most agree?

- ○ Private Property is the foundation of civil society and should not be limited by the State (1)
- ○ Private Property is the foundation of civil society and should be limited by the State only in extreme circumstances, subject to compensation (2)
- ○ Private Property Rights have a social function and can be limited by the State every time it is needed, subject to compensation (3)
- ○ The Common Good and social goals are more important than Private Property Rights (4)
- ○ None of the above (5)
- ○ Prefer not to say (6)

Page Break

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Q1.12 To which statement you most agree?

- ○ Income inequalities reflect individual efforts and merits and should not be a concern for the State (1)
- ○ Some degrees of income inequalities are needed to promote the individual effort (2)
- ○ The government should try to diminish income inequalities (3)
- ○ Income inequalities are wrong and should be eliminated (4)
- ○ None of the above (5)
- ○ Prefer not to say (6)

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End of Block: Block 0: Demographic section

Start of Block: Block 1

Q2.1 What is your expertise of the national laws on the topic of copyright?

- Perfectly knowledgeable (1)
- Very knowledgeable (2)
- Moderately knowledgeable (3)
- Vaguely knowledgeable (4)
- Not knowledgeable at all (5)
- Prefer not to say (6)

Page Break

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Q2.2 Which statement best describes your understanding of the copyright agreements you signed with journals for your scientific publications?

- ○ I understood all of the agreements (1)
- ○ I understood most of the agreements (2)
- ○ I understood about half the agreements (3)
- ○ I understood less than half of the agreements (4)
- ○ I barely understood the agreements (5)
- ○ Prefer not to say (6)

Page Break

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Q2.3

Figure 1 Creative Commons

Looking at the Figure 1 above [click on the blue label to zoom]. How many of the 6 symbols of copyright agreements in Figure 1 do you understand?

- 0 (1)
- 1 (2)
- 2 (3)
- 3 (4)
- 4 (5)
- 5 (6)
- 6 (7)
- Prefer not to say (8)

Page Break

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Q2.4

In general, how familiar are you with the following areas of copyright law? [Please move the cursor to represent how much you are familiar, where 0 is not familiar at all and 100 is perfectly familiar.]

	Not at all familiar 0	half 33	67	Very familiar 100
Orphan works ()				
Authorship and ownership of rights ()				
Copyright duration ()				
Out-of-commerce works ()				
Copyright exceptions ()				
Licensing ()				

Page Break

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Q2.5 The use of pirated software for research purposes is pretty common. How accurate or inaccurate is the sentence: *Researchers can rely on copyright exemptions even while using pirated software.*

- strongly accurate (4)
- accurate (5)
- somewhat accurate (6)
- neither accurate nor inaccurate (7)
- somewhat inaccurate (8)
- inaccurate (9)
- strongly inaccurate (10)
- Prefer not to say (11)

Page Break

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Q2.6 How accurate or inaccurate is the sentence: *Academics never need to ask permission from the copyright holder when they use materials of third parties for teaching or research purposes*

- ○ strongly accurate (1)
- ○ accurate (2)
- ○ somewhat accurate (3)
- ○ neither accurate nor inaccurate (4)
- ○ somewhat inaccurate (5)
- ○ inaccurate (6)
- ○ strongly inaccurate (7)
- ○ Prefer not to say (8)

Page Break

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Q2.7 How accurate or inaccurate is the sentence: *The copyright of a published non-open access scientific article normally belongs only its Authors*

- ○ strongly accurate (1)
- ○ accurate (2)
- ○ somewhat accurate (3)
- ○ neither accurate nor inaccurate (4)
- ○ somewhat inaccurate (5)
- ○ inaccurate (6)
- ○ strongly inaccurate (7)
- ○ Prefer not to say (8)

Page Break

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Q2.8 Do you need to ask permission from the journal to post a copy of a published article on the web page of the course you are teaching?

- ○ Yes (1)
- ○ No (2)
- ○ Maybe (3)

Page Break

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Q2.9 Do you need to ask permission to the journal or to the author to share in a password-protected platform (like e-learning) accessible only to students a published article?

- Yes (1)
- No (2)
- Maybe (3)

Page Break

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Q2.10 Do you need to ask permission to the journal or to the author if you use a figure from a published article and you cite the source?

- ○ Yes (1)
- ○ No (2)
- ○ Maybe (3)

Page Break

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Q2.11 To cite a part of the text from another scientific article is a common practice. The following sentence is correct or incorrect to your knowledge: *There is no length limit to a quotation for criticism purposes if the quotation is required for the specific purpose and the author source are indicated*

- ○ Extremely correct (1)
- ○ Moderately correct (2)
- ○ Slightly correct (3)
- ○ Neither correct nor incorrect (4)
- ○ Slightly incorrect (5)
- ○ Moderately incorrect (6)
- ○ Extremely incorrect (7)
- ○ Prefer not to say (8)

Page Break

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Q2.12 Text and Data Mining are becoming an important source of information for research purposes. The following sentence is correct or incorrect to your knowledge: *Text and Data Mining for research purposes can be used for research purposes pursued on material protected by copyright without the need for prior authorization and without compensating the copyright holders*

- ○ Extremely correct (1)
- ○ Moderately correct (2)
- ○ Slightly correct (3)
- ○ Neither correct nor incorrect (4)
- ○ Slightly incorrect (5)
- ○ Moderately incorrect (6)
- ○ Extremely incorrect (7)
- ○ Prefer not to say (8)

Page Break

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Q2.13 In your opinion what should be the appropriate length for copyright protection of a scientific article?

- ○ Scientific Articles should not be protected by copyright (1)
- ○ Less than 2 years from publication (2)
- ○ Between 2 and 20 years from publication (3)
- ○ Less than 50 years from the death of the author (4)
- ○ More than 50 years from the death of the author (5)
- ○ I don't know (6)
- ○ Prefer not to say (7)

Page Break

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Q2.14 According to the law in the country where you work, which is the length of copyright protection for scientific works?

- ○ less than 20 years from the death of the author (1)
- ○ between 20 years and 50 years from the death of the author (2)
- ○ between 50 years and 95 years from the death of the author (3)
- ○ more than 95 years from the death of the author (4)
- ○ I don't know (5)
- ○ Prefer not to say (6)

Page Break

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Q2.15 Does your university institution provide guidance and advice of rules relating to copyright law and your work as an academic?

- Yes (1)
- No (2)
- Maybe (3)
- Prefer not to say (4)

Page Break

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Q2.16 Do you consider likely or unlikely that someone will be legally prosecuted for copyright infringement (such as streaming or downloading pirated music, TV-series, movies) in your country?

- ○ Absolutely likely (1)
- ○ Likely (2)
- ○ Slightly likely (3)
- ○ Neither likely nor unlikely (4)
- ○ Slightly unlikely (5)
- ○ Unlikely (6)
- ○ Absolutely unlikely (7)
- ○ Prefer not to say (8)

Page Break

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Q2.17 Have you ever discussed using SCI-HUB with your colleagues?

- ○ Yes (1)
- ○ No (2)
- ○ Maybe (3)

Page Break

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Q2.18 How accurate or inaccurate is the following sentence to describe your thinking: *I think accessing a movie or TV series on an illegal platform is just as wrong as illegally accessing a scientific article*

- ○ Strongly accurate (1)
- ○ Accurate (2)
- ○ Somewhat accurate (3)
- ○ Neither accurate nor inaccurate (4)
- ○ Somewhat inaccurate (5)
- ○ Inaccurate (6)
- ○ Strongly inaccurate (7)
- ○ Prefer not to say (8)

Page Break

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Q2.19 Do you feel guilty when you use copyrighted material (papers, software, books, movies) without permission for research purposes?

- Yes (1)
- No (2)
- Maybe (3)
- Prefer not to say (4)

Page Break

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Q2.20 In your opinion, the Copyright Protection on scientific articles is morally a good or a bad thing

- Extremely good (1)
- Moderately good (2)
- Slightly good (3)
- Neither good nor bad (4)
- Slightly bad (5)
- Moderately bad (6)
- Extremely bad (7)
- Prefer not to say (8)

Page Break

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Q2.21 Are you involved in commercial activities (such as books, textbooks, patents) related to your research

- Yes (1)
- No (2)
- Maybe (3)
- Prefer not to say (4)

Skip To: Q2.23 If Are you involved in commercial activities (such as books, textbooks, patents) related to your re... = No

Page Break

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Q2.22 Which percentage of your total working time do you devote to commercial activities (such as books, textbooks, patents)? [Please move the cursor to indicate the percentage of your time]

	None		Half		All
	0	33	67	100	
()					

Page Break

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Q2.23 What are for you the most negative aspects of being an academic [please indicate more than one]

- ☐ teaching responsibilities (1)
- ☐ administrative responsibilities (2)
- ☐ not being prepared, emotionally, for distressing aspects of competition (3)
- ☐ being unable to concentrate on my research (4)
- ☐ feeling under pressure to proceed in the career (5)
- ☐ the behaviour of junior colleagues (6)
- ☐ the behaviour of senior colleagues (7)
- ☐ the inadequate facilities or funding (8)
- ☐ being away from home (9)
- ☐ the feeling that sometimes my research is a waste of time (10)
- ☐ the feeling that sometimes my research is a waste of public money (11)
- ☐ It undermined my confidence in knowledge and science (12)
- ☐ not having the appropriate recognition from my colleagues (13)
- ☐ other [please indicate it] (14) _____

Page Break

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Q2.24 Software piracy is considered common or uncommon among your colleagues

- Extremely common (1)
- Moderately common (2)
- Slightly common (3)
- Neither common nor uncommon (4)
- Slightly uncommon (5)
- Moderately uncommon (6)
- Extremely uncommon (7)
- Prefer not to say (8)

Page Break

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Q2.25 Circulating without permission copies of material protected by copyright (books, articles, data..) is considered appropriate or inappropriate by your colleagues?

- Extremely appropriate (1)
- Moderately appropriate (2)
- Slightly appropriate (3)
- Neither appropriate nor inappropriate (4)
- Slightly inappropriate (5)
- Moderately inappropriate (6)
- Extremely inappropriate (7)
- Prefer not to say (8)

Page Break

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Q2.26 When you were a student, how likely or unlikely is that you used proprietary software, data, or books copies without the license

- Extremely likely (1)
- Moderately likely (2)
- Slightly likely (3)
- Neither likely nor unlikely (4)
- Slightly unlikely (5)
- Moderately unlikely (6)
- Extremely unlikely (7)
- Prefer not to say (8)

Page Break

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End of Block: Block 1

Start of Block: Block 2

Q3.1 How much you are satisfied or dissatisfied with the resources of your library

- Extremely satisfied (1)
- Moderately satisfied (2)
- Slightly satisfied (3)
- Neither satisfied nor dissatisfied (4)
- Slightly dissatisfied (5)
- Moderately dissatisfied (6)
- Extremely dissatisfied (7)
- Prefer not to say (8)

Page Break

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Q3.2 In the last year, how many times you were not able to find a journal article in the one provided by the journal subscription of your library

- Always (1)
- Most of the time (2)
- About half the time (3)
- Sometimes (4)
- Never (5)
- Prefer not to say (6)

Page Break

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Q3.3 How likely or unlikely you are to ask a colleague you don't know to send you a published article

- Extremely likely (1)
- Moderately likely (2)
- Slightly likely (3)
- Neither likely nor unlikely (4)
- Slightly unlikely (5)
- Moderately unlikely (6)
- Extremely unlikely (7)
- Prefer not to say (8)

Page Break

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Q3.4 To your knowledge how many colleagues use platforms or databases like SCI-HUB, Z-Library, or Library Genesis (LibGen)

- Everyone (1)
- Almost everyone (2)
- More than half (3)
- About half of them (4)
- Less than half (5)
- Only a few (6)
- No-one (7)
- Prefer not to say (8)

Page Break

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Q3.5 Have you ever used online platforms or databases like SCI-HUB, Z-Library,or Library Genesis (LibGen)

- ○ Yes (1)
- ○ No (2)
- ○ I am not aware of them (3)

Page Break

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Display This Question:
If Have you ever used online platforms or databases like SCI-HUB, Z-Library,or Library Genesis (LibGen) = Yes

Q3.6 How many papers did you download using platforms or databases like SCI-HUB, Z-Library, or Library Genesis (LibGen) in the last month?

- ○ zero (1)
- ○ at least one (2)
- ○ 2-5 (3)
- ○ 5-10 (4)
- ○ more than 10 (5)

Page Break

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Display This Question:
If Have you ever used online platforms or databases like SCI-HUB, Z-Library,or Library Genesis (LibGen) = Yes

Q3.7 How many times did you use platforms or databases like SCI-HUB, Z-Library, or Library Genesis (LibGen) in the last year?

- ○ zero (1)
- ○ at least one (2)
- ○ 2-5 (3)
- ○ 5-10 (4)
- ○ more than 10 (5)

Page Break

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Display This Question:
If Have you ever used online platforms or databases like SCI-HUB, Z-Library,or Library Genesis (LibGen) = Yes

Q3.8 Why you used platforms or databases like SCI-HUB, Z-Library, or Library Genesis (LibGen) last year [you can indicate more than one]

- ☐ I lack access to the scientific literature (1)
- ☐ For the high cost of scientific articles (2)
- ☐ I used it to complement the journal access of my library (3)
- ☐ It is convenient and saves time (4)
- ☐ To support open science (5)
- ☐ To boycott large publishers such as Elsevier and Springer (6)
- ☐ Prefer not to say (7)
- ☐ Other [please indicate] (8) _____

Page Break

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Q3.9 How adequate or inadequate is the sentence to describe your thoughts: *Academics must research the last available scientific knowledge also using shadow libraries such as SCI-HUB even if they violate Copyright law.*

- ○ Extremely adequate (1)
- ○ Moderately adequate (2)
- ○ Slightly adequate (3)
- ○ Neither adequate nor inadequate (4)
- ○ Slightly inadequate (5)
- ○ Moderately inadequate (6)
- ○ Extremely inadequate (7)
- ○ Prefer not to say (8)

Page Break

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Q3.10 How adequate or inadequate is the sentence to describe your thoughts: *SCI-HUB is a valuable source of scientific knowledge also to professionals outside of academia*

- Extremely adequate (1)
- Moderately adequate (2)
- Slightly adequate (3)
- Neither adequate nor inadequate (4)
- Slightly inadequate (5)
- Moderately inadequate (6)
- Extremely inadequate (7)
- Prefer not to say (8)

Page Break

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Display This Question:
If Have you ever used online platforms or databases like SCI-HUB, Z-Library,or Library Genesis (LibGen) = Yes

Q3.11 Is a platform or database like SCI-HUB, Z-Library, or Library Genesis (LibGen) better or worse than the service to access scientific literature provided by your library

- Much better (1)
- Moderately better (2)
- Slightly better (3)
- About the same (4)
- Slightly worse (5)
- Moderately worse (6)
- Much worse (7)
- Prefer not to say (8)

Page Break

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Q3.12 How important or unimportant is for your research to access scientific literature or books as much as possible

- Extremely important (1)
- Very important (2)
- Moderately important (3)
- Slightly important (4)
- Not at all important (5)

Page Break

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Display This Question:
If Have you ever used online platforms or databases like SCI-HUB, Z-Library,or Library Genesis (LibGen) = Yes

Q3.13 Does the use of platforms or databases like SCI-HUB, Z-Library, or Library Genesis (LibGen) improved your academic performance (i.e. number and quality of publications)?

- ○ Yes (1)
- ○ No (2)
- ○ Maybe (3)

Page Break

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B. Econometric Model

In section 3.1.7 we present the results of our econometric model. Where we model the probability of using Sci-Hub as follows

$$\Pr(Y = 1) = \beta_0 + \beta_1 X + \theta_f + \theta_u + \theta_c$$

Where Y is the dummy *Use_Sci-Hub* which is equal to 1 if the person ever used Sci-Hub and 0 otherwise. X is the vector of drivers of digital piracy identified in figure 14 to test our hypothesis. θ_f are the dummies for ERC scientific fields, θ_u are the dummies for the universities, and θ_c are the dummies for the countries.
Below we report the complete regression table corresponding to results in figure 14

	(1)
FACULTY	−0.835***
	(0.0959)
FEMALE	−0.147
	(0.0960)
FOREIGN	0.345***
	(0.122)
KNOWLEDGE_CREATIVE_COMMONS	0.141***
	(0.0215)
MORAL_JUSTIFICATION	0.369***
	(0.0384)
LIBRARY_SATISFATION	−0.0821***
	(0.0292)
PAST_PIRACY	0.121***
	(0.0201)
COLLEAGUES_PIRACY_PERCEPTION	0.148***
	(0.0236)
TEACHING_LOAD	0.342**
	(0.159)
INSTITUTIONAL_TRAINING	0.0414
	(0.0414)
UNETHICAL_PUBLISHERS	0.301***
	(0.0925)
Constant	−2.274***
	(0.388)
COUNTRY	*Yes*
ERC	*Yes*
UNIVERSITY	*Yes*
OBSERVATIONS	2701

Table 4 Logistic regression estimates with robust standard errors. The table reports the coefficients and with standard errors in parentheses.
*Signif. codes: *p<0.1; **p<0.05; ***p<0.01*

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C. Ethical Approval Case study 1

SCUOLA NORMALE SUPERIORE

COMITATO ETICO CONGIUNTO PER LA RICERCA

Espressione di parere

Delibera n. 03/2021	
Titolo progetto	*Copyright perception to academics and channels for access scientific knowledge*
Proponente	Prof.ssa Arianna Martinelli Istituto di Economia - SSSA
Data della riunione	11/02/2021
Esito della valutazione finalizzata all'espressione di parere	Il Comitato Etico congiunto esprime parere favorevole in merito al protocollo di cui al n. 22 del registro delle richieste di parere presentato in data 21/12/2020, secondo le integrazioni pervenute alla data del 08/02/2021 (v. elenco documenti allegati parte integrante di questa delibera). Decisione assunta all'unanimità (lett. a), art. 13 delle Procedure Operative CEc).
Componenti del Comitato Etico congiunto presenti	Francesco Cardarelli, Arianna Menciassi, Michele Emdin, Alberto Pirni, Emiliano Ricciardi, Francesca Torelli
Firma del Segretario	
Firma del Presidente	

Scuola Superiore Sant'Anna Piazza Martiri della Libertà, 33 - 56127 Pisa - Scuola Normale Superiore Piazza dei Cavalieri, 7 - 56126 Pisa
Segreteria Comitato congiunto: tel: +39 050 883308 e-mail: comitatoetico@santannapisa.it

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D. European academic staff statistics and our sample

Center European		Our Sample
Germany	457,457	
Belgium	34,454	
Luxembourg	1,435	
%	30%	16%
Northen European		
Denmark	25,324	
Netherlands	72,900	
Finland	16,157	
Sweden	37,318	
%	9%	17%
Anglosaxon Systems		
Ireland	9,275	
UK	217,004	
%	14%	13%
Southern European		
Austria	61,818	
Greece	17,049	
Spain	175,019	
France	116,183	
Portugal	35,549	
Italy	96,581	
Cyprus	3,523	
Malta	2,085	
%	31%	33%
Eastern European		
Latvia	6,936	
Lithuania	10,163	
Estonia	4,195	
Hungary	25,174	
Poland	96,719	
Romania	26,429	
Slovenia	7,455	
Slovakia	11,794	
Bulgaria	20,894	
Czechia	19,088	
Croatia	18,167	
%	15%	6%

Table 5 European academic staff in 2020 according to Eurostat data https://ec.europa.eu/eurostat/databrowser/view/EDUC_UOE_PERP01__custom_2988094/default/table?lang=en

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E. Case study 1 – University Information and Subjects taught at universities

Name	N. emails	City	Founded	THE Rank	Res. Rank	Cit. Rank	N. Students	Student/ Staff	% Int Students	Female/ Male	Soc. Sci.	Hum.	Life Sci.	Eng.	Med.
Heidelberg University	9597	Heidelberg	1386	42	71	52	20,020	14.5	18%	54:46	x	x	x	x	x
Humboldt University of Berlin	4633	Berlin	1810	80	54	428	33,388	56.3	18%	NA	x	x	x		x
LMU Munich	1996	Munich	1472	32	34	161	34,249	33.6	17%	61:39	x	x	x		x
Technical University of Munich	4793	Munich	1868	41	42	209	32,377	39.8	31%	36:64	x		x	x	x
University of Tübingen	4503	Tubingen	1477	78	80	242	27,590	36.6	14%	58:42	x	x	x		x

Table 6 Germany University Statistics of email collection

Name	N. emails	City	Founded	THE Rank	Res. Rank	Cit. Rank	N. Students	Student/ Staff	% Int Students	Female/ Male	Soc. Sci.	Hum.	Life Sci.	Eng.	Med.
Budapest University of Technology and Economics	2635	Budapest	1782	1001+	958	1169	19,415	17.7	11%	31 : 69	x			X	
Eötvös Loránd University	2687	Budapest	1635	601–800	747	768	27,199	14.8	10%	63:37	x	x	x		
University of Debrecen	1084	Debrecen	1538	801–1000	1201	1038	26,938	14.1	21%	55:45	x	x	x	X	x
University of Pécs	2657	Pecs	1912	601–800	1183	844	16,798	11.7	24%	57:43	x	x	x	X	x
University of Szeged	1544	Szeged	1872	801–1000	976	878	18,859	12.1	20%	56:44	x	x	x	X	x

Table 7 Hungary University Statistics of email collection

Name	N. emails	City	Founded	THE Rank	Res. Rank	Cit. Rank	N. Students	Student/ Staff	% Int Students	Female/ Male	Soc. Sci.	Hum.	Life Sci.	Eng.	Med.
Maynooth University	1489	Maynooth	1997	401–500	405	456	10,107	28.6	12%	56:44	x	x	x	x	
National University of Ireland, Galway	1187	Galway	1845	301–350	336	405	14,453	26.6	18%	58:42	x	x	x	x	x
Trinity College Dublin	5437	Dublin	1592	155	169	296	17,154	21.4	32%	59:41	x	x	x	x	x
University College Cork	1423	Cork	1845	301–350	544	230	17,051	17.6	19%	58:42	x	x	x	x	x
University College Dublin	1633	Dublin	1854	251–300	245	353	23,148	23.2	30%	NA	x	x	x	x	x

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Table 8 Ireland University Statistics of email collection

Name	N. emails	City	Founded	THE Rank	Res. Rank	Cit. Rank	N. Students	Student/ Staff	% Int Students	Female/ Male	Soc. Sci.	Hum.	Life Sci.	Eng.	Med.
Sapienza University of Rome	6566	Roma	1303	201–250	202	424	77,496	22.9	7%	57:43:	x	x	x	x	x
University of Bologna	11761	Bologna	1088	167	263	221	67,298	24.4	12%	56:44	x	x	x	x	x
University of Milan	8602	Milano	1924	351–400	399	362	45,752	20.9	6%	59:41	x	x	x	x	x
University of Padua	3252	Padova	1222	251–300	321	289	46,900	21.7	7%	55:45	x	x	x	x	x
University of Trento	3793	Trento	1962	301–350	339	333	13,180	20.1	7%	51:49	x	x		x	

Table 9 Italy University Statistics of email collection

Name	N. emails	City	Founded	THE Rank	Res. Rank	Cit. Rank	N. Students	Student/ Staff	% Int Students	Female/ Male	Soc. Sci.	Hum.	Life Sci.	Eng.	Med.
Erasmus University Rotterdam	2224	Rotterdam	1913	72	91	41	26,453	26.8	22%	50:50	x	x	x		x
Leiden University	4158	Leiden	1575	70	60	214	30,178	19	18%	59:41	x	x	x		x
University of Amsterdam	7337	Amsterdam	1632	66	69	102	24,747	12.8	24%	57:43	x	x	x		
Utrecht University	6252	Utrecht	1636	75	73	141	32,022	14	10%	58:42	x	x	x		
Wageningen University & Research	6843	Wageningen	1876	62	95	45	14,356	21	27%	54:46	x		x	x	

Table 10 The Netherlands University Statistics of email collection

Name	N. emails	City	Founded	THE Rank	Res. Rank	Cit. Rank	N. Students	Student/ Staff	% Int Students	Female/ Male	Soc. Sci.	Hum.	Life Sci.	Eng.	Med.
Karolinska Institute	191	Stockholm	1810	36	47	66	7,696	8.8	26%	68:32	x	x	x		x
Lund University	9214	Lund	1666	103	100	202	27,443	11.3	19%	55:45	x	x	x		
Stockholm University	3879	Stockholm	1878	183	130	235	27,200	19.1	10%	NA	x	x	x		
University of Gothenburg	2726	Gothenburg	1891	191	210	94	19,616	9.8	13%	NA	x	x	x		x
Uppsala University	6115	Uppsala	1477	111	98	212	25,112	15.8	18%	58:42	x	x	x	x	x

Table 11 Sweden University Statistics of email collection

Name	Subjects Offered
Budapest University of	Mathematics & Statistics, Physics & Astronomy, Mechanical & Aerospace Engineering, Education, Business & Management, Computer Science, Communication & Media Studies, Chemical Engineering, Civil Engineering, Electrical & Electronic Engineering, Psychology, Architecture, Accounting & Finance

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Technology and Economics	
Eötvös Loránd University	Computer Science, Politics & International Studies (incl Development Studies), History, Philosophy & Theology, Chemistry, Sport Science, Geology, Environmental, Earth & Marine Sciences, Archaeology, Mathematics & Statistics, Psychology, Accounting & Finance, Languages, Literature & Linguistics, Geography, Physics & Astronomy, Business & Management, Art, Performing Arts & Design, Education, Mechanical & Aerospace Engineering, Sociology, Economics & Econometrics, Law, Biological Sciences, Communication & Media Studies
Erasmus University Rotterdam	Communication & Media Studies, Psychology, Business & Management, History, Philosophy & Theology, Sociology, Law, Medicine & Dentistry, Education, Other Health, Politics & International Studies (incl Development Studies),Art, Performing Arts & Design, Accounting & Finance, Economics & Econometrics
Heidelberg University	Languages, Literature & Linguistics, Sociology, Law, Chemistry, Education, Politics & International Studies (incl Development Studies), History, Philosophy & Theology, Sport Science, Other Health, Medicine & Dentistry, Archaeology, Mathematics & Statistics, Geography, Geology, Environmental, Earth & Marine Sciences, Economics & Econometrics, Physics & Astronomy, Psychology, Computer Science, Art, Performing Arts & Design, Biological Sciences
Humboldt University of Berlin	Biological Sciences, Chemistry, Other Health, Politics & International Studies (incl Development Studies), Sociology, Mathematics & Statistics, Physics & Astronomy, Law, Computer Science, Sport Science, Geography, Economics & Econometrics, Medicine & Dentistry, Geology, Environmental, Earth & Marine Sciences, Archaeology, History, Philosophy & Theology, Psychology, Agriculture & Forestry, Art, Performing Arts & Design, Accounting & Finance, Communication & Media Studies, Education, Languages, Literature & Linguistics, Business & Management
Karolinska Institute	Geology, Environmental, Earth & Marine Sciences, Mathematics & Statistics, Languages, Literature & Linguistics, Education, Psychology, Medicine & Dentistry, Sociology, Chemical Engineering, Other Health, Business & Management, Biological Sciences
Leiden University	Languages, Literature & Linguistics, Law, Sociology, Other Health, Economics & Econometrics, Medicine & Dentistry, Psychology, Business & Management, History, Philosophy & Theology, Education, Biological Sciences, Communication & Media Studies, Politics & International Studies (incl Development Studies), Mathematics & Statistics, Computer Science, Art, Performing Arts & Design, Archaeology, Geology, Environmental, Earth & Marine Sciences, Physics & Astronomy, Chemistry
LMU Munich	Business & Management, Computer Science, Sociology, Geology, Environmental, Earth & Marine Sciences, Archaeology, Other Health, Education, Chemistry, Psychology, Languages, Literature & Linguistics, Art, Performing Arts & Design, Politics & International Studies (incl Development Studies),Communication & Media Studies, Biological Sciences, Law, Medicine & Dentistry, Economics & Econometrics, Physics & Astronomy, Mathematics & Statistics, History, Philosophy & Theology, Veterinary Science, Geography
Lund University	Biological Sciences, Politics & International Studies (incl Development Studies),Architecture, Communication & Media Studies, Art, Performing Arts & Design, Physics & Astronomy, Archaeology, Law, Geology, Environmental, Earth & Marine Sciences, Business & Management, Computer Science, Psychology, Other Health, Geography, Electrical & Electronic Engineering, Sociology, Languages, Literature & Linguistics, Chemistry, Economics & Econometrics, Mathematics & Statistics, Accounting & Finance
Maynooth University	Communication & Media Studies, Education, History, Philosophy & Theology, General Engineering, Law, Accounting & Finance, Biological Sciences, Chemistry, Psychology, Languages, Literature & Linguistics, Mathematics & Statistics, Business & Management, Geography, Electrical & Electronic Engineering,

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	Economics & Econometrics, Geology, Environmental, Earth & Marine Sciences, Politics & International Studies (incl Development Studies), Sociology, Computer Science, Physics & Astronomy
National University of Ireland, Galway	Other Health,Electrical & Electronic Engineering,Chemical Engineering,Politics & International Studies (incl Development Studies),Agriculture & Forestry,Archaeology,Computer Science,Languages, Literature & Linguistics,Business & Management,Physics & Astronomy,Medicine & Dentistry,Civil Engineering,Geology, Environmental, Earth & Marine Sciences,Mathematics & Statistics,Economics & Econometrics,Communication & Media Studies,Mechanical & Aerospace Engineering,General Engineering,Education,Chemistry,History, Philosophy & Theology,Law,Art, Performing Arts & Design,Sociology,Psychology,Accounting & Finance,Biological Sciences,Geography
Sapienza University of Rome	Languages, Literature & Linguistics,Geology, Environmental, Earth & Marine Sciences,Mathematics & Statistics,Law,Psychology,Chemical Engineering,Communication & Media Studies,Archaeology,Mechanical & Aerospace Engineering,Economics & Econometrics,General Engineering,Politics & International Studies (incl Development Studies),Computer Science,Chemistry,Sociology,History, Philosophy & Theology,Other Health,Electrical & Electronic Engineering,Education,Civil Engineering,Business & Management,Art, Performing Arts & Design,Biological Sciences,Geography,Architecture,Medicine & Dentistry,Physics & Astronomy,Accounting & Finance
Stockholm University	Communication & Media Studies,Business & Management,Mathematics & Statistics,Physics & Astronomy,Politics & International Studies (incl Development Studies),Sociology,Psychology,Geography,History, Philosophy & Theology,Law,Computer Science,Education,Chemistry,Languages, Literature & Linguistics,Archaeology,Geology, Environmental, Earth & Marine Sciences,Economics & Econometrics,Biological Sciences,Accounting & Finance
Technical University of Munich	General Engineering,Biological Sciences,Agriculture & Forestry,Economics & Econometrics,Mechanical & Aerospace Engineering,Chemistry,Mathematics & Statistics,Architecture,Electrical & Electronic Engineering,Physics & Astronomy,Sport Science,Business & Management,Accounting & Finance,Civil Engineering,Politics & International Studies (incl Development Studies),Computer Science,Chemical Engineering,Education,Other Health,Geology, Environmental, Earth & Marine Sciences
Trinity College Dublin	Art, Performing Arts & Design,Physics & Astronomy,Languages, Literature & Linguistics,Chemistry,Civil Engineering,Sociology,History, Philosophy & Theology,Biological Sciences,Economics & Econometrics,General Engineering,Politics & International Studies (incl Development Studies),Accounting & Finance,Law,Medicine & Dentistry,Geology, Environmental, Earth & Marine Sciences,Education,Psychology,Mechanical & Aerospace Engineering,Geography,Mathematics & Statistics,Communication & Media Studies,Business & Management,Computer Science,Electrical & Electronic Engineering,Other Health
University College Cork	Computer Science,Electrical & Electronic Engineering,Law,Sociology,History, Philosophy & Theology,Chemistry,Accounting & Finance,Economics & Econometrics,Languages, Literature & Linguistics,Physics & Astronomy,Other Health,Education,Mechanical & Aerospace Engineering,Sport Science,Mathematics & Statistics,Psychology,Biological Sciences,Medicine & Dentistry,Civil Engineering,General Engineering,Politics & International Studies (incl Development Studies),Agriculture & Forestry,Art, Performing Arts & Design,Communication & Media Studies,Geography,Geology, Environmental, Earth & Marine Sciences,Chemical Engineering,Business & Management,Archaeology,Architecture
University College Dublin	Accounting & Finance,Other Health,Mathematics & Statistics,Psychology,Computer Science,Electrical & Electronic Engineering,History, Philosophy & Theology,Sociology,Archaeology,Chemical Engineering,Economics & Econometrics,Architecture,Agriculture & Forestry,Physics & Astronomy,Languages, Literature & Linguistics,Business & Management,Politics & International Studies

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	(incl Development Studies),Art, Performing Arts & Design,Civil Engineering, Veterinary Science, Medicine & Dentistry, Biological Sciences, Geology, Environmental, Earth & Marine Sciences, Law, General Engineering, Chemistry, Education, Communication & Media Studies, Geography, Mechanical & Aerospace Engineering,Sport Science
University of Amsterdam	Physics & Astronomy, Chemistry, Communication & Media Studies, Psychology, Politics & International Studies (incl Development Studies),Accounting & Finance, Sociology, Art, Performing Arts & Design, Archaeology, Economics & Econometrics, Mathematics & Statistics, Computer Science,Business & Management, Biological Sciences, Geography, Law, Languages, Literature & Linguistics,Geology, Environmental, Earth & Marine Sciences, History, Philosophy & Theology, Education
University of Bologna	Architecture, Computer Science, Psychology, Geography, History, Philosophy & Theology, Mathematics & Statistics, Electrical & Electronic Engineering,Sport Science, Other Health, Civil Engineering,Politics & International Studies (incl Development Studies),Medicine & Dentistry, Veterinary Science, Communication & Media Studies, Education, Economics & Econometrics, Law, Biological Sciences, Art, Performing Arts & Design, Geology, Environmental, Earth & Marine Sciences,Chemical Engineering, Agriculture & Forestry,Archaeology,Sociology,Languages, Literature & Linguistics, General Engineering,Physics & Astronomy, Business & Management,Accounting & Finance, Mechanical & Aerospace Engineering, Chemistry
University of Debrecen	Electrical & Electronic Engineering, Mathematics & Statistics, Law, Languages, Literature & Linguistics, Architecture, Accounting & Finance, Physics & Astronomy,Other Health, Communication & Media Studies, Art, Performing Arts & Design,Civil Engineering,Geography,History, Philosophy & Theology,Education,Chemical Engineering,Politics & International Studies (incl Development Studies),Medicine & Dentistry,Chemistry,Biological Sciences,Agriculture & Forestry, Sport Science,Business & Management, General Engineering,Economics & Econometrics, Geology, Environmental, Earth & Marine Sciences, Computer Science, Psychology, Mechanical & Aerospace Engineering, Sociology
University of Gothenburg	Archaeology,Chemistry,History, Philosophy & Theology,Biological Sciences,Psychology,Art, Performing Arts & Design,Sociology,Medicine & Dentistry,Geology, Environmental, Earth & Marine Sciences,Business & Management,Languages, Literature & Linguistics,Communication & Media Studies, Sport Science, Law, Other Health, Geography, Economics & Econometrics, Education, Mathematics & Statistics, Accounting & Finance, Computer Science,Physics & Astronomy,Politics & International Studies (incl Development Studies)
University of Milan	Education, Sport Science,Business & Management, Chemical Engineering,Communication & Media Studies, History, Philosophy & Theology, Mathematics & Statistics, Politics & International Studies (incl Development Studies),Economics & Econometrics, Medicine & Dentistry,Chemistry,Archaeology,Psychology,Biological Sciences,Sociology,Veterinary Science,Law,Computer Science, Geology, Environmental, Earth & Marine Sciences, Other Health,Physics & Astronomy,Accounting & Finance, Languages, Literature & Linguistics,Agriculture & Forestry, Geography
University of Padua	Art, Performing Arts & Design, Mechanical & Aerospace Engineering,Mathematics & Statistics,Sociology,Biological Sciences,Other Health,Geology, Environmental, Earth & Marine Sciences,History, Philosophy & Theology,General Engineering,Chemistry,Education,Languages, Literature & Linguistics,Agriculture & Forestry,Physics & Astronomy,Economics & Econometrics,Geography,Civil Engineering,Accounting & Finance,Psychology,Law,Chemical Engineering,Communication & Media Studies,Computer Science,Archaeology,Business & Management,Sport Science,Medicine & Dentistry,Architecture,Veterinary Science,Electrical & Electronic Engineering,Politics & International Studies (incl Development Studies)
University of Pécs	Accounting & Finance,Mechanical & Aerospace Engineering,Education,Geology, Environmental, Earth & Marine Sciences,Medicine & Dentistry,Communication & Media Studies,Sport Science,Biological

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	Sciences,Economics & Econometrics,Business & Management,Law,Geography,Archaeology,Agriculture & Forestry,Languages, Literature & Linguistics,Civil Engineering,Other Health,Electrical & Electronic Engineering,Psychology,Politics & International Studies (incl Development Studies),History, Philosophy & Theology,General Engineering,Architecture,Physics & Astronomy,Computer Science,Art, Performing Arts & Design,Chemistry,Sociology,Mathematics & Statistics
University of Szeged	Computer Science,Biological Sciences,Accounting & Finance,Archaeology,Electrical & Electronic Engineering,Medicine & Dentistry,Law,Sociology,Psychology,Economics & Econometrics,Geography,Mechanical & Aerospace Engineering,Mathematics & Statistics,Other Health,Education,Sport Science,Languages, Literature & Linguistics,Communication & Media Studies,Agriculture & Forestry,Art, Performing Arts & Design,History, Philosophy & Theology,Business & Management,Geology, Environmental, Earth & Marine Sciences,Politics & International Studies (incl Development Studies),Chemistry,Physics & Astronomy
University of Trento	Accounting & Finance, Economics & Econometrics,Mathematics & Statistics,Sport Science,Agriculture & Forestry,Politics & International Studies (incl Development Studies),Mechanical & Aerospace Engineering,History, Philosophy & Theology,Electrical & Electronic Engineering,Archaeology,Languages, Literature & Linguistics,Civil Engineering,Business & Management,Sociology,Biological Sciences,Psychology,Physics & Astronomy,Law,Computer Science,Architecture
University of Tübingen	Law, Sport Science,Medicine & Dentistry,Computer Science,Geography,Languages, Literature & Linguistics,Sociology,Economics & Econometrics,History, Philosophy & Theology,Geology, Environmental, Earth & Marine Sciences,Physics & Astronomy,Mathematics & Statistics,Psychology,Business & Management,Biological Sciences,Politics & International Studies (incl Development Studies),Education,Other Health,Archaeology,Chemistry,Communication & Media Studies,Accounting & Finance
Uppsala University	Other Health,Physics & Astronomy,Sociology,General Engineering,Languages, Literature & Linguistics,Geography,Electrical & Electronic Engineering,Law,Mathematics & Statistics,History, Philosophy & Theology,Medicine & Dentistry,Psychology,Politics & International Studies (incl Development Studies),Business & Management,Geology, Environmental, Earth & Marine Sciences,Accounting & Finance,Economics & Econometrics,Civil Engineering,Chemical Engineering,Chemistry,Biological Sciences,Archaeology,Education,Computer Science,Communication & Media Studies
Utrecht University	History, Philosophy & Theology, Computer Science,Business & Management,Psychology,Chemistry,Education,Biological Sciences,Veterinary Science,Economics & Econometrics,Sociology,Politics & International Studies (incl Development Studies),Mathematics & Statistics,Geography,Geology, Environmental, Earth & Marine Sciences,Languages, Literature & Linguistics,Physics & Astronomy,Accounting & Finance,Medicine & Dentistry,Other Health,Communication & Media Studies,Law,Art, Performing Arts & Design
Wageningen University & Research	Veterinary Science, Geology, Environmental, Earth & Marine Sciences,Biological Sciences,Economics & Econometrics,Chemistry,Politics & International Studies (incl Development Studies),Other Health,Business & Management,Agriculture & Forestry,Chemical Engineering,Communication & Media Studies,Sociology

Table 10 Fields by university

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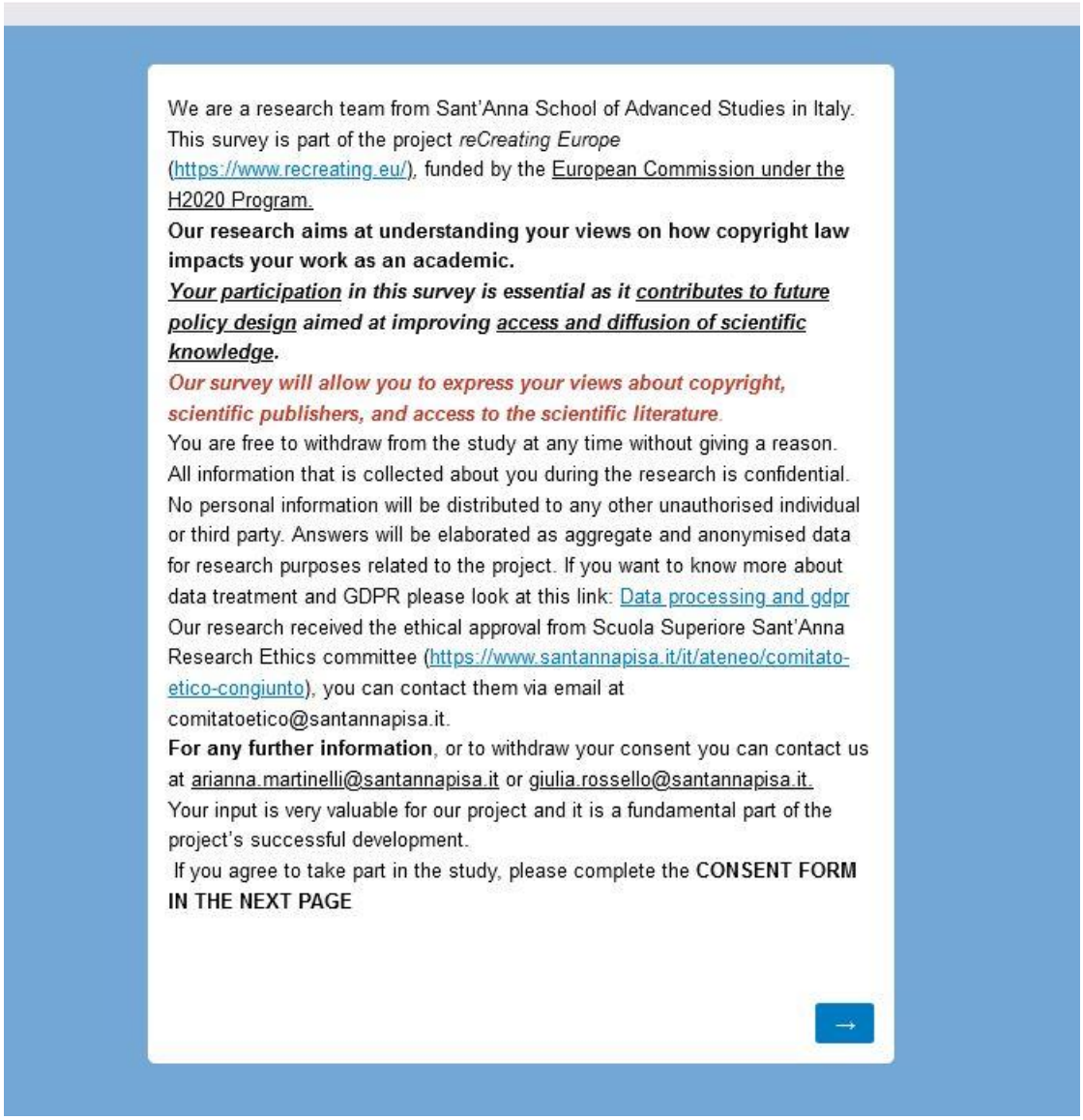

Figure 26 Look and Feel of the Survey of Case Study 1

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Annex 2 – Survey Case Study 2

A. Survey Case Study 2

The survey will be available in the official languages of the six selected countries and administered online through Jisc Online Survey as the study-hosting service.

General Information

1. In which country are you based?
    a. Germany
    b. Hungary
    c. Ireland
    d. Italy
    e. The Netherlands

2. Which category best describes your age?
    a. Between 18 and 30
    b. Between 30 and 45
    c. Between 45 and 60
    d. More than 60
    e. Rather not say

3. Gender:
    a. Male
    b. Female
    c. Non-binary
    d. Rather not say

4. What is the highest level of education you have completed?
    a. I did not attend school.
    b. Primary education
    c. High school
    d. Technical/Vocational training
    e. Bachelor's degree
    f. Master's degree
    g. Doctorate

5. Are you a:
    a. Person with a visual impairment
    b. A blind person
    c. None of the above (if this option is ticked the survey closes)

6. Do you consider yourself to be: *(Tick all relevant options)*
    a. An Indigenous person

Please specify the Indigenous Group to which you belong.

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b. A person belonging to an Ethnic Minority Group

Please specify the Ethnic Group to which you belong.

c. A person belonging to a Linguistic Minority Group

Please, specify the Linguistic Minority Group to which you belong.

d. A person belonging to a Religious Minority Group

Please, specify the Religious Minority Group to which you belong.

e. A Migrant
f. A Refugee
g. None of the above.

7. Which of the following best describes the area you live in?
   a. Urban area
   b. Rural area

8. Do you have access to the Internet daily?
   a. Yes
   b. No

      i. (If yes): Do you have Internet access?
      a. For free (Public Wi-Fi Hotspot/library/coffee shop/train station, etc.)
      b. Through a paid subscription to an Internet Service Provider

9. Do you have access to your own computer/tablet/Smartphone?
   a. Yes
   b. No
      i. (If no): Do you share a device with another person?
         1. Yes
         2. No

10. What assistive technologies do you use? *(Tick all relevant options)*
    a. Screen-readers
    b. Text-to-speech synthesis (TTS) technologies
    c. Screen Magnifiers
    d. Braille Printers
    e. Other (please specify)
    f. None

Access to printed material in accessible formats

11. What kind of printed material in accessible format do you access the most? (*Please, select up to 2 options*)
    a. Novel/short stories/essay
    b. Academic books
    c. Journals/Magazines
    d. Comics/art books
    e. Other (please specify)

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f. None

12. On a scale of 1 to 5, how would you rate your experience of accessing printed material in an accessible format?

1 (Extremely Bad) 2 (Mostly bad) 3 (Partially good) 4 (Good) 5 (Very good)

13. What kind of format do you prefer? (*Please select up to two options*)
    a. Braille
        i. Printed Braille
        ii. Electronic Braille
    b. Audio reading materials (such as audiobooks)
    c. Digital reading materials (such as ebooks)

14. In your experience, are accessible formats available in your community? (*Please, fill in only the options that apply to you*)

	Yes	No	Yes, but with limitations	I do not know
Braille				
Electronic Braille				
Audio reading materials (such as audiobooks)				
Digital reading material (such as ebooks)				

Please, explain further if you wish.

15. How do you get reading material in accessible formats?
    a. I convert the material in an accessible format
    b. My caregiver converts reading material in an accessible format for my personal use
    c. My organisation/service provider provides me with reading
        i. Through a catalogue
        ii. By request
    d. The public library of my community has a catalogue of reading material available in accessible formats.
    e. Other, please specify

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16. Do you think that digitalisation (i.e. the widespread publication of reading material -pictures and text- into a digital format that a computer or another electronic device can process) has improved the availability of reading materials in accessible formats?
    a. Yes
    b. Yes, but only to a limited extent
    c. No
    d. I do not know

17. How much have the restrictions imposed because of the COVID-19 pandemic impacted your access to the following format materials? (*Please, fill in only the options that apply to you*)

	Positive impact	Negative impact	No impact	I do not know
Braille				
Electronic Braille				
Audio reading materials (such as audiobooks)				
Digital reading material (such as ebooks)				

Please, explain further if you wish.

18. On the whole, in your own experience, what are the main barriers to get and use accessible formats? *(Tick all relevant options)*
    a. Intellectual property/copyright/creators' rights
    b. Lack of knowledge about copyright exceptions
    c. Lack of technologies to make the material accessible to me
    d. I do not know

Knowledge and Perception of Copyright Law

International treaties, EU law and national legislation establish a series of flexibilities to copyright that allow beneficiaries to produce accessible works without infringing copyright. Through this section, we would like to know what you think about this matter. Please, note that your answers will be anonymised. This means that nobody can identify the people that participate in the survey.

19. How knowledgeable are you of European Union laws and national laws on copyright?
    a. Extremely knowledgeable
    b. Very knowledgeable
    c. Moderately knowledgeable
    d. Slightly knowledgeable
    e. Not knowledgeable at all

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20. Do you know what the Marrakesh Treaty provides for?
    a. Yes
    b. No
    c. I do not know
        i. If yes: Do you think that it has enhanced awareness about the accessibility of printed material for persons with visual impairments?
            a. Yes
            b. No
            c. I do not know

21. Are you aware about how the Marrakesh Treaty and the related EU Directive have been implemented in your own country?
    a. Yes
    b. No
    c. I do not know
        i. If no: Would you like to know more about this issue?
            d. Yes
            e. No
            f. I do not know

22. Have you experienced an improvement in your access to accessible printed materials in the last few years?
    a. Yes
    b. No
    c. I do not know
        ii. If yes: In particular when?
            a. In the last year
            b. In the last two years
            c. I do not know
        ii. If yes: why?
            a. Because of the Marrakesh Treaty was implemented in our country
            b. Because national copyright legislation has been recently changed
            c. Because I have better technologies
            d. Because of the advancements in digitalization
            e. Because there is more awareness about accessibility
            f. Other (please specify)
            g. I do not know

23. When you use printed material in accessible formats do you think about whether you may infringe copyright laws?
    a. Yes (please specify)
    b. No
    c. I do not now
    d. I rather not say

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24. In your opinion and, on the whole, are current copyright laws and exceptions for persons with visual impairments adequate to protect the rights of persons with visual impairments to access cultural materials?
    a. Yes
    b. No
    c. I do not know

Thank you for your participation. We appreciate your time
Please share any feedback you wish to make about the accessibility or the content of this survey with us at laura.serra@mu.ie
If during your participation in this study you feel the information and guidelines that you were given have been neglected or disregarded in any way, or if you are unhappy about the process, please contact the Secretary of the Maynooth University Ethics Committee at research.ethics@mu.ie or +353 (0)1 708 6019. Please be assured that your concerns will be dealt with in a sensitive manner.
For your information, the Data Controller for this research project is Maynooth University, Maynooth, Co. Kildare. Maynooth University Data Protection officer is Ann McKeon in Humanity house, room 17, who can be contacted at ann.mckeon@mu.ie. Maynooth University Data Privacy policies can be found at https://www.maynoothuniversity.ie/data-protection.

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Annex 3 – Legal Mapping of Marrakesh Directive Implementation

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State	Germany	Hungary	Ireland	Italy	The Netherlands	Sweden
Original Provision	*Copyright Act of 9 September 1965, s.45 (a)(b)*	*Copyright Act LXXVI of 1999, s. 41*	*Copyright and Related Rights Act, 2000, s.104*	*Law No 633 of 1941, for the Protection of Copyright and Neighbouring Rights, Art. 71bis*	*Copyright Act (Act of September 23 1912 s. 15i*	*Act on Copyright in Literary and Artistic works (No. 729 of 1960), Art. 17*
Personal Scope (People Covered)	Persons whose access to the work, because of a disability, is not possible or is made considerable more difficult by the already available means of sensual perception, if such reproduction is necessary to facilitate access	Disabled Persons	Person who has a physical or mental disability Disability is defined in the *Statute of Limitations, 1957* s. 48: Infant, of unsound mind, or subject to the *Forfeiture Act* where no administrator is appointed.	Persons with a Disability (defined by a decree of Minister for Culture in agreement with Minister of Labour and Social Affairs).	Disabled Persons	Persons with a Disability
Extent of Exception (Rights Covered)	Reproduction for non-commercial purposes, distribution exclusively to beneficiary of exception Equitable remuneration, but exemption for the production of solely individual copies	Non-commercial use of a work s. 17: (a) reproduction (b) dissemination (c) public performance (d) broadcasting to the public by radiation or otherwise (e) retransmission of work to the public through an organisation other than the original (f) recasting (g) exhibition	Reproduction, Supply/ Distribution	Reproduction, Communication to the public	Reproduction or Disclosure to the public for exclusive use of disabled persons, for non-commercial purpose, as required by the disability	Reproduction, distribution, communication to persons with disabilities Right to remuneration where person with disability keeps the work
Material Scope (Works Covered)	s. 2: Literary, scientific and	Art. 1: All literary, scientific and artistic works,	s. 2: literary, dramatic, musical or artistic work,	Art. 1: Works of the mind having a creative	*s. 15i*: Literary, artistic or scientific work	*Art 1*: A fictional or descriptive representatio

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State	Germany	Hungary	Ireland	Italy	The Netherlands	Sweden
	artistic works.[33] Only the author's own intellectual creations constitute works within the meaning of this Act.	regardless whether specified in the act.[34]	sound recording, film, broadcast, cable programme, typographical arrangement of a published edition or an original database and includes a computer program	character and belonging to literature, music, figurative arts, architecture, theatre or cinematography, whatever their mode or form of expression shall be protected.. Computer program Art 2: Defines these works[35]	*s. 10* defines these works[36]	n in writing or speech; computer program and preparatory design material for computer programs; musical or dramatic, cinematographic, or photographic work or another work of fine arts; work of architecture or applied art; work

[33] literary works, such as written works speeches and computer programs musical works; pantomimic works, including works of dance; artistic works, including works of architecture and of applied art and drafts of such works; photographic works, including works produced by processes similar to photography; cinematographic works, including works produced by processes similar to cinematography; illustrations of a scientific or technical nature, such as drawings, plans, maps, sketches, tables and three-dimensional representations.

[34] Including: Work of literature (e.g. fiction, literature, science, journalism); Public speaking; All forms of computer programming and related documentation ("software"); Plays, musicals, dance games, silence games; A musical work, with or without lyrics; Radio and television games; Cinematographic and other audiovisual works; Drawings, paintings, sculptures, engravings, lithographic printing or the like; Work of art; Cartographic works; Architectural works and plans, related building plans; Design of technical facilities; Work of applied art and its design; Costume, set, their design; Industrial design artwork; The database qualifying as a collection work

[35] 1) literary, dramatic, scientific, didactic and religious works, whether in written or oral form; 2) musical works and compositions, with or without words, dramatico-musical works, and musical variations that themselves constitute original works; 3) choreographic works and works of dumb show, the form of which is fixed in writing or otherwise; 4) works of sculpture, painting, drawing, engraving and similar figurative arts, including scenic art 5) architectural plans and works; 6) works of cinematographic art, whether silent or with sound form, provided they are not mere documentaries protected in accordance with the provisions of Chapter V of Part II. 7) works of photographic art and works expressed with processes analogous to photograph, provided they are not simple photographs, protected according to the provisions of Chapter V of Part II. 8) computer programs, in whatever form they are expressed, provided that they are original and result from the author's own intellectual creation. Ideas and principles which underlie any element of a computer program, including those which underlie its interfaces, shall be excluded from the protection afforded by this Law. The term "computer program" shall include their preparatory design materials. 9) databases under point II of art. 1, meant as collections of works, data or other independent materials which are systematically or methodically arranged and can be individually accessed by electronic or other means. The copyright protection for databases shall not extend to their contents and shall be without prejudice to any rights subsisting in said contents. 10) Works of industrial designs which themselves have a creative and artistic value.

[36] 1°. books, brochures, newspapers, periodicals and other writings; 2°. dramatic and dramatic-musical works; 3°. recitations; 4°. choreographic works and mime shows; 5°. musical works, with or without words; 6° drawings, paintings, works of architecture and sculpture, lithographs, engravings and other graphic works; 7°. geographical maps; 8°. designs, sketches and plastic models pertaining to architecture, geography, topography or other sciences; 9°. photographic works; 10°.films; 11°. works of applied art and industrial drawings and models; 12°. computer programs and preparatory design materials for such; and generally any creation in the literary, scientific or artistic domain, regardless of the manner or form in which it has been expressed. 2. Reproductions of a literary, scientific or artistic work in a modified form, such as translations, musical arrangements, screen and otheradaptations, as well as collections of different works are protected as separate works, without prejudice to the copyright in the original work. 3. Collections of works, data or other independent materials arranged in a systematic or methodical way and individually accessible by electronic or other means are protected as separate works, without prejudice to other rights in the collection and without prejudice to copyrights or other rights in the works, data or other materials included in the collection.

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State	Germany	Hungary	Ireland	Italy	The Netherlands	Sweden
						expressed in some other manner; maps and other descriptive works executed as drawings, engravings, or in a three-dimensional form
Implementing Legislation of Marrakesh Directive	*Law implementing the Marrakech Directive on Improved Access to Copyrighted Works for the Benefit of People with a Visual or Print Impairment*	*Act LVI of 2018 amending Act LXXVI of 1999 on copyright* *Government Decree 198/2018. (X. 25.)* on the detailed rules of free use for the benefit of persons with disabilities affecting reading ability	*Statutory Instrument No. 412 of 2018 – European Union (Marrakesh Treaty) Regulations 2018*	*Law of 3 May 2019, No. 37, Provisions for the fulfillment of obligations arising from Italy's membership of the European Union – European Law 2018*	*Act for the Implementation of the Reading Disability Convention Directive and for the Implementation of the Reading Disability Convention Regulation* *Decree of 30 August 2018 determining the date of entry in to force the Act for the Implementation of the Print Disability Directive for the Implementation of the Reading Disability Convention Regulation*	*Act amending the Act (1960: 729) on copyright in literary and artistic works* *Ordinance amending the Copyright Ordinance (1993: 1212*)
Current Provision	*Copyright Act of 9 September 1965* as last amended by Article 1 of the *Act of the 28 November 2018*, ss. *45 (a) and (b)*	*Copyright Act LXXVI of 1999, s. 41* as amended	*Copyright and Related Rights Act, 2000,* s.*104,* as amended by *Copyright and Other Intellectual Property Law Provisions Act, 2019, ss. 26 & 27 (inserting ss. 104A and 104B)*	*Law No 633 of 1941, for the Protection of Copyright and Neighbouring Rights*, Art. 71bis as amended by *Law of 3 May 2019, No. 37*	*Copyright Act (Act of September 23, 1912) (as amended) Arts. 15i, 15j, 15k, 15m*	*The Act (1960: 729) on copyright in literary and artistic works,* as amended by the *Act and Ordinance of 2018, Art. 17* *International Copyright Regulation (1994:193)* as amended

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State	Germany	Hungary	Ireland	Italy	The Netherlands	Sweden
Personal Scope (People Covered)	Persons with disabilities *s. 45(b)(2):* Persons who are unable, as a result of a physical or mental impairment or of a perceptual disability, to read literary works, even with the assistance of a visual aid, to substantially the same degree as persons without such an impairment or disability	Persons with disabilities *Decree 198/2018 s. 1.3*: blind; whose visual impairment cannot be corrected to such an extent that his visual function is substantially the same as that of persons without such impairment and who is consequently unable to read printed works in substantially the same way as persons without such impairment; who has difficulty in perceiving or reading and, as a result, is unable to read printed works in the same way as persons who do not have such difficulty, or who, because of his disability, is unable to keep or browse through a book and to move or focus his eyes to such an extent as to enable him to read.	Persons with disabilities *Disability Act, 2005 s. 2*: a substantial restriction in the capacity of the person to carry on a profession, business or occupation in the State or to participate in social or cultural life in the State by reason of and enduring physical, sensory, mental health or intellectual impairment	Persons with disabilities *Art. 15.1*: blind; with a visual impairment that cannot be improved in such a way as to substantially guarantee a visual functionality equivalent to that of a person without this disability and for this not able to read the printed works to an extent substantially equivalent to people without this disability; with perceptive or reading disability and therefore not in able to read printed works to a substantially extent equivalent to that of a person without this disability; with a physical disability that prevents her from keeping or handle a book, or stare or shift your gaze into the measure that	Persons with disabilities *Art. 15m*: reading handicapped person*:* person who is blind; with a visual impairment which cannot be improved to such an extent that the person obtains vision essentially equivalent to that of a person without such a disability and which renders the person incapable of producing printed works substantially to the same extent as a person without such a disability to read; with a perceptual or other reading disability that renders the person unable to read printed works to substantially the same degree as a person without such disability; or who is otherwise unable, as a result of a physical disability, to hold or handle a book, or to see clearly or move his eyes to an extent normally considered necessary for reading	Persons with limited functional ability *Art. 17*: By a person with visual or other reading impairment is meant: a person with blindness; a person with a visual impairment that cannot be improved so that the visual acuity becomes substantially equivalent to the visual acuity of a person who does not have such a visual impairment; a person who has perception or reading difficulties, or; a person who, due to a physical disability, is unable to hold or handle a book or focus or move his eyes to the extent normally required to be able to read

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State	Germany	Hungary	Ireland	Italy	The Netherlands	Sweden
				would normally be needed to read.		
Extent of Exception (Rights Covered/ Uses)	*s. 45(a):* Rights of reproduction, communication to the public, distribution, rental and lending rights Specific condition for reproduction use: the reproduction (for non-commercial reasons) and distribution is permissible as far as the access of persons with disabilities to the work in an already available format is impossible or made considerably more difficult due to the disability. *s. 45(a)(2):* Compensation required for reproduction and distribution, claims may only be asserted through a collecting	s. 41(1a): Rights of reproduction, communication to the public, distribution	Rights of reproduction, communication to the public, distributed, rental and lending[37] Persons with disabilities or designated bodies need to use licensing schemes in case these are in place.	Art 15.1: Rights of reproduction, communication to the public, making available, distribution, rental and lending	*Art. 15i*: Rights of reproduction, translation, distribution, communication to the public Financial compensation for authors when the exception and limitation for persons with disabilities is used.	*Art. 17*: Rights of reproduction, distribution, communication to the public *Art. 17(c)*: Right of compensation for author where person with a disability keeps or reproduces the accessible work *Art. 17(e):* Right to remuneration where person with a disability retains the copy of the work

[37] (a) make, or cause to be made, a copy of the work for the purpose of modifying the copy; (b) supply the modified copy of the work to a person with a disability; (c) supply the modified copy of the work to another designated body; (d) receive a modified copy of the work from— (i) another designated body, or (ii) a person with a disability; (e) supply the modified copy of the work that it has received under paragraph (d) to— (i) a person with a disability, or (ii) another designated body.

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State	Germany	Hungary	Ireland	Italy	The Netherlands	Sweden
	society; compensation not required for production solely of individual copies					
Material Scope (Works Covered)	Any work or subject matter. Works not newly defined.	General works or published works *s. 41(1d):* any work published in the form of a written or other sign system; illustrations thereof, including digital and audio versions thereof	Any work or subject matter *s. 104B*: Requirement to make electronic form of work available for copy	*Art. 1:* Works of the mind having a creative character and belonging to literature, music, figurative arts, architecture, theatre or cinematography, whatever their mode or form of expression. Includes computer programs.	*Art. 15i:* Artistic, literary and scientific works (as defined above)	*Art. 1:* Literary works, including: fiction or descriptive presentation in writing or speech, computer program, musical or theatrical work, film works, photographic work or any other work of visual art, works of architecture or applied art, or works that have been expressed in some other way.

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