

Design for Open access Publications in European research Areas for Social Sciences and Humanities

Project Number: GA 731031

OPERAS-D

WP 2: Developing network and e-infrastructure strategy

Landscape Study on Open Access Publishing

The project has received funding from European Union's Horizon 2020 research and innovation programme under grant agreement 731031.



Contents

List of Acronyms and Abbreviations.....	2
Executive Summary	3
1. Introduction	5
2. Milestones in the Open Access Movement	6
2.1 The three Bs: Budapest, Berlin and Bethesda	6
2.2 Pathways to Open Access.....	9
2.3 Policies and Mandates.....	10
2.4 Infrastructures	15
3. Open Access Publishing in SSH	19
3.1 The Landscape.....	19
3.2 Journals	21
3.2.1 The Development of Open Access Journal Publishing	21
3.2.2 Business Models	22
3.3 Data Publishing in SSH.....	30
3.4 Monographs.....	32
3.4.1 The evolving landscape of open access monographs	32
3.4.2 The costs of Monographs	38
3.4.3 Business models for open access monographs	39
4. Open Peer Review.....	44
5. Conclusions - Policy Implications	48
Annex I	52
OPERAS Network Members.....	52
References.....	53

List of Acronyms and Abbreviations

AHRC: Arts and Humanities Research Council

ANDS: Australian National Data Service

APC: Article Processing Charges

BOAI: Budapest Open Access Initiative

CRIS: Current Research Information Systems

DFG: German Research Foundation (Deutsche Forschungsgemeinschaft)

ESRC: Economic and Social Research Council

FTE: Full Time Equivalent

FWF: Austrian Science Fund ((Fonds zur Förderung der wissenschaftlichen Forschung)

HEFCE: The Higher Education Council for England

MS: Member State(s)

NIH: National Institutes of Health

NUP: New University Presses

OA: Open Access

OJS: Open Journal Systems

OpenDOAR: The directory of open access repositories

OPR: Open Peer-Review

PASTEUR4OA: Open Access Policy Alignment Strategies for European Union Research

RCUK: Research Councils UK

Redalyc: Red de Revistas Científicas de América Latina y el Caribe, España y Portugal

REF: Research Excellence Framework

ROARMAP: The Registry of Open Access Repository Mandates and Policies

Scielo: The Scientific Electronic Library Online

SCOAP3: Sponsoring Consortium for Open Access Publishing in Particle Physics

SSH: Social Sciences and Humanities

Executive Summary

OPERAS-D (Design) is a project funded by Horizon 2020 (Grant Agreement: 731031). The project aims to support the development of a European infrastructure for open access scholarly communication, with a special focus on the Social Sciences and Humanities (SSH). The Landscape Study is a deliverable for Work Package 2 (WP2) “Developing network and e-infrastructure strategy”, which documents the current state of affairs in the field of scholarly publishing and provides input on the discussion regarding the elaboration of effective long-term strategies for the future development of the digital infrastructure and community building.

The study comprises desk research and identifies recent developments and challenges within the scholarly communication framework. It particularly sketches the landscape of academic publishing in the SSH, with special reference to existing and emerging open access models within the OPERAS network and beyond. To this extent, the report examines important initiatives in Europe, the USA, Australia and elsewhere, in terms of operational and business models, stakeholder participation, current recommendations and good practices. Special attention is given to assessing the use and impact of open access publications, and indicating the goals and needs yet to be met.

Reference is also made to international initiatives that stand out in the open access movement, as well as policy frameworks and mandates introduced by the European Commission and/or at national level. Thus, this report highlights long-term commitments undertaken by key stakeholders towards the development of digital infrastructures, the implementation of sustainable funding models for open access publishing and the enhancement of scholarly communication processes.

As part of the ongoing debate on the dissemination of scientific output, there is an increasing demand for open access (to publications and research data), which is becoming increasingly adopted as the main practice for communicating the results of publicly funded research. A variety of complementary initiatives have been launched to this end: among these, emphasis is placed here on the opening up of the academic publishing ecosystem to new business models that enhance further the impact of open access journals and monographs in the Social Sciences and Humanities.

In examining all emerging trends in journal and monograph publishing, the report outlines key challenges and potential issues to be addressed by future initiatives. Recently introduced and experimental models (such as scholar-led publishing bodies, and new university presses) share common orientations towards increased participation of researchers in the publishing process and overcome certain deficiencies of the commercial publishing model.

Notwithstanding the importance of such initiatives, as the Report concludes, fragmentation (both in terms of the size and nature of publishers and of their business models) is a key characteristic in the academic publishing landscape. In this context, the main challenge in adopting effective open access publishing practices is to identify and assess current needs and limitations that permeate the academic publishing landscape, in operational as well as communicational terms.

The landscape study confirms that successful research relies primarily on unrestricted access to high quality scientific output and cross-disciplinary, international collaboration. Shared and remotely accessed digital infrastructures constitute an important feature towards the realisation of the European Research Area, and OPERAS aspires to be actively engaged in the implementation of a new mode of science that overcomes fragmentation and enables unrestricted access to high quality scientific output.

1. Introduction

OPERAS (Open access in European Research Area through Scholarly communication) (<http://operas-eu.org>) network aims at introducing “the principles of Open Science and ensuring effective dissemination and global access to research results, particularly in the Social Sciences and Humanities (SSH)”.¹ This aim will be achieved by uniting and improving existing and uncoordinated publishing and communication services and infrastructures across European member states under research infrastructures so as to address these challenges and improve the way research is carried out, communicated and evaluated within the SSH. This will result to a significantly more advanced and efficient open access publishing system.

The core group of the OPERAS network is currently implementing OPERAS-D (Design), Horizon 2020 funded project (Grant Agreement: 731031), which aims to support² the development of a European digital infrastructure for open access scholarly communication, particularly in the SSH. The project aims to address the long-term requirements for the development of the digital infrastructure and community building and to expand towards other parties within and beyond Europe and in diverse fields of the SSH.³

The present Report is a deliverable for Work Package 2 (WP2) “Developing network and e-infrastructure strategy” which has the following objectives:

- To identify and examine existing and emerging policies and practices in open access SSH publishing within the OPERAS network and beyond it, in particular in Europe
- To identify the key stakeholders involved in open access SSH publishing in Europe and beyond
- To explore ways of optimizing e-infrastructure investments for OPERAS members and of creating complementarities

¹ OPERAS (Open Access in the European Research Area through scholarly communication) <http://operas-eu.org>

² The core group comprises a limited number of strategic partners of the OPERAS network: OpenEdition, OAPEN, the Max Weber Foundation (MWS), the National Documentation Centre (EKT), UCL Press, the University of Coimbra, the University of Zadar, and the Institute of Literary Research of the Polish Academy of Sciences.

³ OPERAS-D (Design for Open Access Publications in European Research Area for Social Sciences and Humanities) <http://operas.hypotheses.org/operas-d>

- To explore avenues for the creation of a long-term e-infrastructure strategy and community building
- To develop the OPERAS design study and implementation roadmap.

To reach these objectives, the OPERAS-D team has conducted an analysis of academic and grey literature to identify and examine existing and emerging practices in open access publishing in the SSH, map the key stakeholders and outline key challenges in the open access publishing landscape and potential issues to be addressed by the OPERAS network. The study will focus primarily on the European environment, but will also present international initiatives of interest to the current analysis. The core findings of this desk review are in turn expected to feed-in the design study and the roadmap that will define governance models, structures and scientific and technical concepts for future services and the requirements for long-term sustainability (T2.3) as well as the design of the business model that will address the purpose and economic logic of OPERAS (T4.1).

2. Milestones in the Open Access Movement

2.1 The three Bs: Budapest, Berlin and Bethesda

Three important initiatives stand out in the open access movement: the Budapest, the Berlin and the Bethesda declarations. The **Budapest Open Access Initiative** (BOAI) released in 2002 comprises a set of principles for open access to scholarly journal literature. The BOAI is considered as one of the key initiatives in the open access movement as “it was the first initiative to use “open access”....the first to articulate a public definition, the first to propose complementary strategies for realizing OA, the first to generalize the call for OA to all disciplines and countries and the first to be accompanied by significant funding”.⁴ The Budapest declaration defines open access as

“free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them

⁴ Budapest Open Access Initiative- Ten Years on from the Budapest Open Access Initiative- setting the default to open, 12 September 2012, <http://www.budapestopenaccessinitiative.org/boai-10-recommendations>

*for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself”.*⁵

The BOAI initiative has had major impact on the adoption and promotion of open access. The initiative highlighted communication as the foundation of the scientific enterprise. Its aim was to “accelerate research, enrich education, share the learning of the rich with the poor and the poor with the rich, make this literature as useful as it can be, and lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge.”⁶

On the occasion of its tenth anniversary the initiative was supplemented by a set of recommendations to reaffirm the BOAI “statement of principle, ...statement of strategy, and ...statement of commitment”. The recommendations focus on policy, licensing and reuse, infrastructure and sustainability, advocacy and coordination.⁷

Fifteen years later in 2015, a survey was launched to gather feedback so as to take stock of the collective effort. Responses were received from 69 countries around the world. A working group synthesized the feedback received and will provide updated recommendations. A reflection written by Jean Claude Guedon, one of the pioneers of the open access movement was released on that occasion. The document entitled “Open Access: Towards the Internet of the Mind” noted that the variety of forms that open access has taken over the years do not always conform with the notion as it was originally conceived and that in some instances these variations are the product of the power play between different actors and compromises. The document also notes that from a publishers’ perspective, open access has been reshaped in a new way posing the question of whether open access is perceived as a communication system to support science or as a business model used to reinforce the position of publishers.⁸

⁵ Budapest Open Access Initiative, “Read the Budapest Open Access Initiative”, 14 February 2002, <http://www.budapestopenaccessinitiative.org/read>

⁶ Ibid.

⁷ Budapest Open Access Initiative, op. cit.

⁸ Guedon, J.C. “Open Access: Towards the Internet of the Mind”, 23 February 2017 <http://www.budapestopenaccessinitiative.org/open-access-toward-the-internet-of-the-mind>

The second milestone in the open access movement is the **Berlin Declaration**. The Berlin Declaration on open access to knowledge in the sciences and humanities is the outcome of the Berlin Conference organized in 2003 by the Max Planck Society and the European Cultural Heritage Online (ECHO) project aimed at creating a new web-based research environment. The conference brought together national and international research organisations, research funders, libraries, learned societies, etc. Since then, annual follow-up workshops have been organized. The Berlin Declaration aims “to promote the Internet as a functional instrument for a global scientific knowledge base and human reflection and to specify measures which research policy makers, research institutions, funding agencies, libraries, archives and museums need to consider”.⁹ The Declaration supports the transition to the electronic open access paradigm by encouraging researchers to make their research outputs openly available (on the basis of the principles of the open access paradigm), developing means for evaluating open access contributions and journals to maintain quality assurance and good scientific practice, recognizing open access publications in tenure evaluations.¹⁰

The **Bethesda Statement on Open Access** was also released in the same year. The purpose of the statement was “to stimulate discussion within the biomedical research community on how to proceed, as rapidly as possible, to the widely held goal of providing open access to the primary scientific literature”.¹¹ The statement provided a working definition for open access publication and subsequently the reports of the working groups of institutions and funding agencies, libraries and publishers, scientists and scientific societies.

In discussing the catalyst role these initiatives have had in the uptake of open access, the role individuals like Peter Suber (the drafter of the Budapest Open Access Initiative) and Jean Claude Guedon have had in this process should also be acknowledged. What is even more interesting is that, as Martin Paul Eve notes, while the history of open

⁹ Max Planck Society, Berlin Declaration on Open Access to Knowledge in the Sciences and the Humanities, 22 October 2003, https://openaccess.mpg.de/67605/berlin_declaration_engl.pdf

¹⁰ Ibid.

¹¹ Bethesda Statement on Open Access Publishing, released 20 June 2003, <http://legacy.earlham.edu/~peters/fos/bethesda.htm>

access seems to be science-centric, some of the landmark initiatives stem from researchers in the humanities.¹²

2.2 Pathways to Open Access

There are broadly two (structured) ways for providing Open Access to scientific outputs: self-archiving (the Green route) and open access publishing (the Gold route).

In **self-archiving (the Green route)** the author deposits (archives) the published article or the final peer-reviewed manuscript in an online repository. This can be done at the time of publication or after publication as some publishers request that the manuscript be made open after a specific time period has elapsed (embargo period).¹³ Repositories usually run on open source software and make use of common technical standards which enhance their interoperability, while they are indexed by search engines like Google Scholar that enhances the visibility and impact of their content. Repositories can be general, subject-based or institutional. Prominent examples of subject-repositories include arXiv (high energy physics and related fields), RePec (economics) and PubMedCentral (life sciences). In terms of institutional repositories, the University of Southampton is considered a pioneer as it developed the first one in 2000.

In **open access publishing (the Gold route)** the article is published immediately in open access. Open access publishing entails a variety of business models and stakeholders: from large commercial publishers to small non-profit ones. Some publishers charge article processing charges (APCs) which shift the cost from the reader to the author (and the latter's host institution or funding agency).¹⁴ A recent OpenAIRE report¹⁵ identifies three sub-components of Gold open access publishing:

¹² Eve, M. P. (2014) "Open Access and the Humanities: Contexts, Controversies and the Future", Cambridge, Cambridge University Press.

¹³ Authors can check a journal's self-archiving policy through the SHERPA RoMEO service that provides related information on a journal basis
<http://www.sherpa.ac.uk/romeo/index.php?la=en&flDnum=|&mode=simple>

¹⁴ Swan, A. (2012) Policy Guidelines for the Development and Promotion of Open Access. UNESCO.

¹⁵ Johnson, R., Fosci, M., Chiarelli, A., Pinfield S., Jubb, M. (2017). "Towards a Competitive and Sustainable OA Market in Europe - A Study of the Open Access Market and Policy Environment". Report commissioned by OpenAIRE.

Gold – Hybrid: subscription-based journals providing an open access option through an offsetting agreement or APC payment

Gold –APC: articles available in open access, upon payment of a publication fee to the publisher by authors, funders or institutions

Gold no – APC: publication in a fully open access journal

The Directory of Open Access Journals (DOAJ) and the Directory of Open Access Books (DOAB) are a valuable source for identifying open access publishers.

2.3 Policies and Mandates

In addition to the importance of the declarations discussed in the previous section, open access has been boosted further through the adoption of policies and mandates by research organization and research funders.

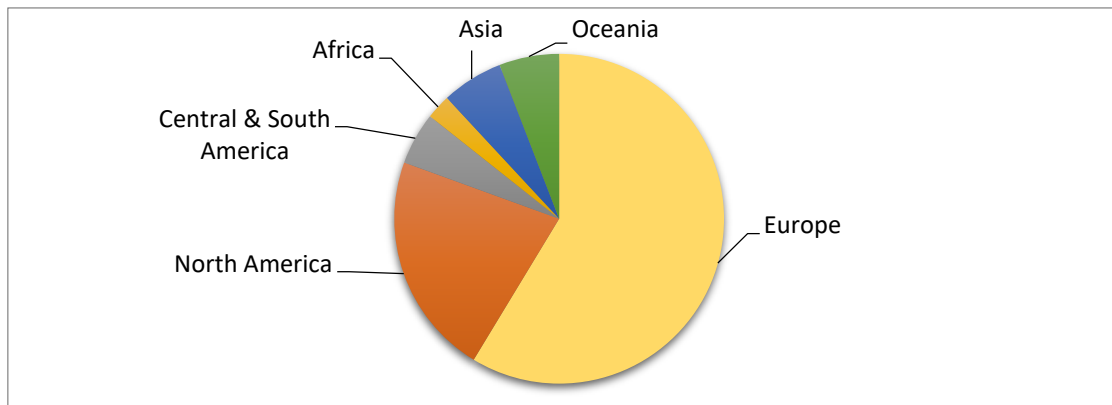
ROARMAP (The Registry of Open Access Repository Mandates and Policies) provides important information regarding the uptake of open access policies worldwide. Following the revamping of ROARMAP -undertaken in the framework of the PASTEUR4OA project- with a new classification scheme for policies that records far more detail and provides more extensive search functionality, ROARMAP now includes more than 600 policies, the majority of which are found in European countries. Of these 2/3 are institutional policies and about 10% funder policies.¹⁶ It is evident that both research organisations and funders are key driving forces behind the transition to an open access environment through the funds they use, the policies and mandates they adopt, etc.

Looking at the total (not just mandatory) number of policies worldwide it is evident that Europe is leading the way. A further interesting fact is that while Europe has approximately 25% of the world’s researchers (in FTE) it has twice the number of open access policies as North America who in turn is second in terms of researchers (22%).¹⁷

Figure 1: Number of Open Access policies worldwide

¹⁶ Swan, A., Gargouri, Y., Hunt, M., and Harnad, S. (2015) “Report on policy recording exercise, including policy typology, and effectiveness and list of further policy maker targets”, Deliverable D3.1, PASTEUR4OA Project, March 2015, <http://pasteur4oa.eu/deliverables?page=1>

¹⁷ Ibid.



As shown in the PASTEUR4OA report approximately half of the policies are mandatory: this is important as mandatory policies work better than voluntary ones. For the purpose of the PASTEUR4OA study, a policy was defined as mandatory if it required deposit of articles in a repository (Green open access) or required open access publishing for articles (Gold open access).

In addition to revamping ROARMAP, PASTEUR4OA undertook a policy effectiveness exercise which looked into the types of policies that successfully deliver open access and the clauses that are more effective. The examination of the factors that enhance policy effectiveness were prompted by the fact that the number of open access material does not reflect the increase in the number of open access policies observed over the previous years. The analysis¹⁸ conducted provided a list of criteria around which policies should align to maximize their effectiveness. These are the following:

- Must deposit (mandatory policy)
- Deposit cannot be waived
- Link deposit with research evaluation.

At the EU-level, the **European Commission's** 2012 Recommendation on access to and preservation of scientific information¹⁹ called on member states to improve their policies and practices on access and preservation. Open access (for publications and research data) has been further strengthened in Horizon 2020 through specific requirements in the Grant Agreement (articles 29.2 and 29.3) and the Work Programme.

¹⁸ The study focused on institutional policies alone as research funder policies are more difficult to monitor.

¹⁹ European Commission (2012a) Commission Recommendation of 17.07.2012 on access to and preservation of scientific information, Brussels, C(2012)4890 final.

The core argument behind the open access mandate is that information already paid for by the public purse should not be paid for again each time it is accessed or used, and that it should benefit European companies and citizens to the full. According to the Horizon 2020 Guidelines on open access to scientific publications and research data, each beneficiary must ensure open access to all peer-reviewed scientific publications, relating to its results.²⁰ While the Guidelines note that the dominant type of publication is the journal article, grant beneficiaries are also encouraged to provide open access to other types of publications like monographs, books, conference proceedings and grey literature.²¹ The mandate applies to all scientific disciplines.

More recently, the EU's support on open access has been further strengthened through the 2016 Council decision reaffirming the EU's commitment "to further promote the mainstreaming of open access to scientific publications by continuing to support a transition to immediate open access as the default by 2020".²² In such context, the Commission, the member states and relevant stakeholders are invited to catalyze this transition. The European Commission has lately used the broader term "Open Science" aimed at describing "the on-going evolution in the modus operandi of doing research and organizing science" which is in turn enabled by Big Data and Digital Technologies.²³ This new paradigm entails important and on-going transitions in the way research is performed, researchers collaborate, knowledge is shared and science is organized.²⁴ A key component of Open Science is open access to publications and research data.²⁵ To support further open science initiatives, the European Science Monitor (commissioned by the European Commission- DG Research and Innovation)

²⁰ European Commission (2016) H2020 Programme Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020, version 3.1, 25 August 2016.

²¹ Ibid.

²² Council of the European Union (2016) The transition towards an Open Science System- Council conclusions adopted on 27/05/2016 <http://data.consilium.europa.eu/doc/document/ST-9526-2016-INIT/en/pdf>

²³ European Commission (2016) Open Innovation, Open Science, Open to the world- a vision for Europe, Brussels, <https://ec.europa.eu/research/openinnovation/index.cfm>

²⁴ Ibid.

²⁵ Amsterdam Call for Action, 2016 <https://english.eu2016.nl/documents/reports/2016/04/04/amsterdam-call-for-action-on-open-science>

to assess developments and trends both over time and among countries and scientific disciplines.²⁶

At member state level,²⁷ the Research Councils in the UK (**RCUK**) have adopted an open access policy since 2005. RCUK as public bodies charged with investing public money in research, place particular importance in making research outputs publicly available for the benefit not only of other researchers, but also for users in business, charitable and public sectors, and the general tax-paying public. This is in turn expected to ensure maximum economic and social return. The RCUK policy aims “to achieve immediate, unrestricted, on-line access to peer-reviewed and published research papers, free of any access charge”. The policy applies to peer-reviewed research articles (including review articles not commissioned by publishers) and conference proceedings. The policy supports both Green and Gold routes, even though RCUK has a preference for immediate open access. APCs and other related charges are covered through open access block grants provided to eligible research institutions. The policy also acknowledges disciplinary differences and has made place for adjustments by allowing different embargo periods.²⁸ The RCUK policy applies both to the ESRC²⁹ (the Economic and Social Research Council) and AHRC (the Arts and Humanities Research Council). The latter states that it does not (at least at this stage) require monographs funded by AHRC to be made openly available.³⁰

HEFCE (The Higher Education Council for England) in its “Policy for open access in Research Excellence Framework 2021” (REF) sets out the details of a requirement that certain research outputs should be made openly accessible to be submitted to the next REF. The policy applies to journal articles and conference proceedings, but not monographs, book chapters or other long forms of publication and sets specific deposit,

²⁶ European Open Science Monitor

<http://ec.europa.eu/research/openscience/index.cfm?pg=about§ion=monitor>

²⁷ PASTEUR4OA has produced a number of case-studies focusing on the adoption of open access policies by research funding organisations and universities. <http://pasteur4oa.eu/resources>

²⁸ RCUK Policy on Open Access and Supporting Guidance. 2013 <http://www.rcuk.ac.uk/documents/documents/rcukopenaccesspolicy-pdf/>

²⁹ Economic and Social Research Council. “Open Access to Research Outputs” <http://www.esrc.ac.uk/funding/guidance-for-grant-holders/open-access-to-research-outputs/>

³⁰ Arts and Humanities Research Council. “Open Access” <http://www.ahrc.ac.uk/about/policies/openaccess/>

discovery and access requirements.³¹ The policy is a Green one as it requires deposit in an institutional repository. In relation to access requirements, in case of an embargo period the output must meet the access requirements as soon as possible and no later than one month after the end of the embargo.

Turning to North America, **NIH** (the National Institutes of Health) requires that the public has access to the published results of NIH funded research. It therefore requests researchers to submit their final peer-reviewed journal manuscripts that arise from NIH funding to the digital archive PubMed Central and the manuscript to be made openly available no later than 12 months after publication date.³²

At institutional level, the open access policy at the **University of Liege** is the most effective policy at global level with 87% of the university's research articles currently being deposited in the institution's repository (ORBi). The policy which at the time of adoption (2008) was innovative requires immediate deposit of research articles upon acceptance for publication. In cases of embargo periods the item remains restricted until the end of the embargo.³³ To maximize compliance it was made clear that only items deposited in ORBi would be taken into account in either individual or collective assessments within the University, including assessments for promotion and tenure. The policy's main aspects include the mandatory deposit of peer-reviewed articles in ORBi, deposit at acceptance for publication, the deposit cannot be waived, open access for deposited items (respecting publisher embargo periods), deposit as a precondition for research evaluation or assessment. The policy's effectiveness has been so significant that it has been copied by a number of other universities. Since its adoption the university (both the Rector himself and the library) has heavily supported its implementation.³⁴

³¹ Policy for Open Access in Research Excellence Framework 2021. Updates in November 2016. Guidance Note 2016/ 35

http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/2016/201635/HEFCE2016_35.pdf

³² NIH, Public Access Policy, <https://publicaccess.nih.gov/FAQ.htm#4003>

³³ In this case, items are only accessible to university members while those outside the university can request a copy from authors.

³⁴ Swan, A. (2015) PASTEUR4OA Case Study: Institutional policy implementation at the University of Liege, Belgium.

A further example of open access policy is that of the **University of Turin**, an OPERAS partner. The policy requires deposit to the institutional repository no later than the publication date, while open access is provided when the publisher permits. The policy, which has been in effect since 1st November 2013, applies to peer-reviewed manuscripts, books, book sections, monographs, conference proceedings, etc.³⁵ **Gottingen** University also regards “open access as the central publication strategy for the future, which will improve the supply of information in science in the long term”.³⁶ While the policy requests the deposit of published items, it does not specify when the deposited item should be made openly accessible and it does not also link deposit with evaluation.³⁷

2.4 Infrastructures

Open access policies are a critical condition for the support of open access, yet a further significant factor for their success is the availability of the necessary infrastructure. These can take different forms, with the most frequent one being open access repositories. According to **OpenDOAR** (the directory of open access repositories) currently there are 3.339 repositories worldwide with 45,2% (1.510) of them located in Europe. As highlighted by Pablo de Castro the number of European repositories is the direct result of the work carried out through DRIVER and OpenAIRE projects.³⁸ At EU level, OpenAIRE supports the EU’s requirements for open access to publications and data, among others, through the Zenodo repository, a catch-all repository for EC funded research.³⁹ The same study also argues that an additional indicator for understanding a country’s readiness for supporting an open access policy is to look at the OpenAIRE statistics on content collection. As noted in the previous section, researchers can use the SHERPA services (SHERPA RoMEO) for information regarding the self-archiving policies of journals. A more recent development at the EU level relates to the creation

³⁵ Università degli Studi di Torino (2014) Regolamento di Ateneo sull’ accesso aperto- modifiche, https://www.unito.it/sites/default/files/reg_openaccess_2014.pdf

³⁶ <https://www.sub.uni-goettingen.de/en/electronic-publishing/open-access/>

³⁷ ROARMAP <http://roarmap.eprints.org/156/>

³⁸ De Castro, P. (2015) Assessing readiness for open access policy implementation across Europe, <http://pasteur4oa.eu/sites/pasteur4oa/files/resource/PASTEUR4OA%20EuroCRIS%20Case%20Study.pdf>

³⁹ Zenodo. <http://about.zenodo.org/>

of the European Open Science Cloud (EOSC) which aims to create a trusted environment for hosting and processing research data to support EU science.⁴⁰

Table 1: European Open Access Repositories Landscape

Country	Number of Repositories	Number of OA Publications
Austria	14	81936
Belgium	12	217328
Bulgaria	2	2479
Croatia	3	149425
Cyprus	3	5549
Czech Republic	10	149980
Denmark	11	110830
Estonia	1	11145
Finland	6	203366
France	36	1485465
Germany	106	903614
Greece	6	30044
Hungary	6	15536
Iceland	3	25929
Ireland	13	89390
Italy	48	178237
Latvia	5	32884
Lithuania	2	23990
Luxembourg	1	8262
Malta	1	4850
Netherlands	31	470436
Norway	5	178036
Poland	13	49914
Portugal	45	274646
Romania	0	0
Serbia	5	13712
Slovakia	0	0
Slovenia	10	228672
Spain	64	1087568
Sweden	24	224374
Switzerland	16	323352
Turkey	29	53977
United Kingdom	141	5030330

Source: <https://www.openaire.eu/member-states-overview>

DOAJ and DOAB are a further important information source for researchers seeking information on open access publishers. The Directory of Open Access Journals (DOAJ)

⁴⁰ European Open Science Cloud, <https://ec.europa.eu/research/openscience/index.cfm?pg=open-science-cloud>

is a community-curated online directory that indexes and provides access to high quality, open access, peer-reviewed journals. DOAJ was launched in 2003 at Lund University (Sweden) with the aim “to increase the visibility and ease of use of open access scientific and scholarly journals, thereby promoting their increased usage and impact”. The Directory currently includes more than 9.000 journals, representing about 27% of the world’s scholarly peer-reviewed journals. DOAJ is diverse and inclusive: it covers all academic disciplines from 128 countries and many languages. Journals and articles are categorized using the Library of Congress Classification. As such, it is the main venue for authors seeking information for quality open access journals. In early 2017 COAR published the initial outcomes of the next generation repositories working group for public comment.⁴¹

Subject	Records available for this subject
Agriculture	108193
Auxiliary sciences of history	5066
Bibliography, Library science, Information resources	26852
Education	69064
Fine Arts	17192
General Works	69163
Geography, Anthropology, Recreation	78590
History (General) and History of Europe	29069
History America	4914
Language and Literature	54903
Law	14881
Medicine	718840
Military Science	4779
Music and Books on Music	3243
Naval Science	541
Philosophy, Psychology, Religion	44296
Political Science	25254
Science	528273
Social Sciences	189011
Technology	172662

⁴¹ The full text can be accessed here <https://www.coar-repositories.org/files/COAR-Next-Generation-Repositories-February-7-2017.pdf>

Source: <https://doaj.org/subjects>

Journals included in DOAJ can be removed if they are no longer open access, if they have been inactive (have not published during the last year) or have not published enough articles in this year, or have ceased publishing, if the journal website or url does not work, if there is evidence of editorial misconduct, if the journal does not adhere to best practice and if they fail to submit application with the specified time frame. DOAJ has also developed the DOAJ Seal of Approval for Open Access journals (DOAJ Seal). The DOAJ Seal is a mark of certification to those journals that achieve a high level of openness, adhere to best practice and high publishing standards.⁴² Notwithstanding its usefulness, Heather Morisson in a recent article provides a critical evaluation of the service and points to some areas for further improvements. These include a clear separation of information targeting different audiences/ users (publisher and other user), the need to limit the potential for confusion as a result of the limiters available for journal and article specific search, the need to revisit the application form in terms of the mix of questions included.⁴³

The Directory of Open Access Books (DOAB) is a discovery service for Open Access monographs. It currently provides a searchable index and links to the full texts of 7814 academic peer-reviewed books and chapters from 205 publishers. DOAB covers multiple subject areas and determines specific requirements for the inclusion of books in its directories. All books listed in DOAB have an open access license, and collaborating publishers are screened for their peer review policies.

The uptake of open access policies is further supported by other mechanisms or tools such as CRIS (Current Research Information Systems) and publishing platforms, with the latter discussed in more detail in the following sections.

Overall, despite the increase in the uptake of open access policies worldwide and the development of the necessary infrastructure significant disciplinary differences can still be observed. According to Archambault et al. (2014)⁴⁴ the Green Route is particularly

⁴² Directory of Open Access Journals (DOAJ) <https://doaj.org/>

⁴³ Morisson, H. (2017) Directory of Open Access Journals (DOAJ), The Charleston Advisor, doi:10.5260/chara.18.3.25

⁴⁴ Archambault, E., Amyot, D., Deschamps, P., Nicol, A., Provencher, F., Rebut, L. and Roberge, G. (2014) Proportion of Open Access Papers Published in Peer-Reviewed Journals at the European and

present in physics and astronomy (25.6%) and economics and business being the leading field in SSH (11.3%) of papers), while the Gold Route is prevalent in S&T (58% of sample papers) and low in general arts, humanities and social sciences (2.6%). It should be noted that the report looks only at papers and at other forms of scholarly communication like monographs. The higher rates of open access in the above mentioned disciplines should also be linked to the prevalence of appropriate infrastructure (i.e. repositories) like arXiv etc., discussed in the previous section.

3. Open Access Publishing in SSH

3.1 The Landscape

The scholarly publishing market is an “intermediary market”, as researchers are both producers and consumers of research. According to a recent study commissioned for the OpenAIRE project, the market for scholarly journals is estimated at \$10 billion per year⁴⁵ with open access representing an aspect of this ecosystem. Within the open access ecosystem, SSH disciplines are moving much slower when compared to STEM. Open access has been adopted much earlier in the sciences, with high-energy physics being one of the strongest advocates, despite the fact that prominent figures of the open access movement emerged from the humanities. A further factor which has contributed to the boost of open access are mandates from research funders and institutions as discussed in the previous section.

Turning to the slow uptake of open access in the SSH as compared to STEM, Peter Suber argued that discrepancies in the adoption of open access can be attributed to a number of economic and cultural reasons. Focusing in particular in the humanities, he argues that the different pace with which STEM and SSH have transitioned to open access can be explained by the higher journal prices in STEM fields which put increasing pressure on library and university budgets, combined with the availability of more funding in STEM fields (allowing researchers to pay APCs charged by open

World Levels- 1996-2013, D1.8 Date 22/10/2014, http://science-metrix.com/sites/default/files/science-metrix/publications/d_1.8_sm_ec_dg-rtd_proportion_oa_1996-2013_v11p.pdf

⁴⁵ Jonhson, R., Fosci, M., Chiarelli, A., Pinfield, S., Jubb, M. (2017) Towards a competitive and sustainable OA market in Europe- A study of the Open Access Market and Policy Environment, A study prepared for the OpenAIRE2020 project on behalf of the European Commission, Research Consulting, <https://blogs.openaire.eu/wp-content/uploads/2017/03/OA-market-report-28Final-13-March-201729-1.pdf>

access journals while strengthening the taxpayer's argument for open access). Furthermore, Suber notes the reliance of humanities on books (in contrast to STEM fields where journal articles are dominant) and the slower decline in demand in humanities.⁴⁶ While Suber's article was published more than a decade ago the points made are still valid, despite the progress made over this period. Chris Armbruster argues that although journal price increases have been more pronounced in STEM compared to SSH, the latter have understood that open access applies to the same extent in SSH.⁴⁷ As Martin Paul Eve notes the degree of adoption of open access by different disciplines may also be related to their market orientation and thus the extent at which the industry could profit from using the results of publicly funded research.⁴⁸ Eve offers two explanations for the under-representation of SSH within the open access movement: the difference in communication channels of SSH and science and the lower degree of engagement of those working in SSH in a critique of their publication practices.⁴⁹

Despite the overall slow uptake, social scientists have followed the natural sciences by developing the **Social Science Research Network (SSRN)** which is meant to be what ArXiv is to physicists. SSRN is an electronic repository founded in 1994 from a group of scholars. It is composed of 24 specialised networks in each of the social sciences. The SSRN eLibrary contains almost 725.000 papers from 334.339 researchers across 30 disciplines.⁵⁰ In May 2016 it was announced on twitter that Elsevier has acquired SSRN, a move which seems to mark a shift of the strategy towards services and the monetization of data and analytics. The acquisition has given rise to a number of concerns from the open access community and a number of researchers have regarded this as a breach of trust.⁵¹

Research Papers in Economics (RePEc) is another collaborative effort to enhance dissemination of research in economics (and related sciences). The decentralized

⁴⁶ Suber, P. (2005) Promoting Open Access in the Humanities, *Syllecta Classica*, Volume 16, pp. 231-246. <https://doi.org/10.1353/syl.2005.0001>

⁴⁷ Quoted in Frosio, F. (2014) Open Access Publishing: A Literature Review, CREATE Working Paper 2014/1 <http://www.create.ac.uk/wp-content/uploads/2014/01/CREATE-Working-Paper-2014-01.pdf>

⁴⁸ Eve, M. P. (2014), op. cit.

⁴⁹ Ibid. p. 24.

⁵⁰ Social Science Research Network, <https://www.ssrn.com/en/>

⁵¹ Cf. Ross-Hellauer (2016) After SSRN: Hallmarks of trust for subject based repositories <https://blogs.openaire.eu/?p=933>

bibliographic database contains over 2 million research pieces (working papers, journal articles, books, book chapters and software components).⁵²

3.2 Journals

3.2.1 The Development of Open Access Journal Publishing

Open access journals constitute a core component in the translation of open access principles into practice. The rapid growth of open access (journal) publishing during the period 1993-2009 seems to continue during the 2000s with the average annual growth rate of 18% for the number of journals and 30% for the number of articles.⁵³ A more recent study from CREATE shows the rapid growth of open access journals over the past decade with major increases between 2005 and 2011 being noted in Asia, Europe and the United States.⁵⁴

In studying the development of open access journal publishing, Laakso et al. (2011) distinguish between three periods: the pioneering years, the innovation years and the consolidation years. The first period (the Pioneering Years: 1993-1999) is marked by the rather aggressive growth of open access articles and journals. The “business model” most commonly used was based on voluntary labor combined with the use of institutional (university) web browsers free of cost. Technical solutions have been quite simple during this period. The Innovation Years (2000-2004) are marked by the emergence of new business models and the introduction of APCs, mostly in the STEM disciplines. Important initiatives of the period include the launch of Public Library of Science (PLOS), the release of several declarations like the “three Bs” discussed in the previous section, the digitization of printed journals, and the experimentation with the hybrid model (which allows authors of articles in traditional journals to open up their articles for a fee).

Overall, the period is marked by the increased visibility of open access. The third period (the Consolidation Years: 2005-2009) has witnessed significant developments in relation to infrastructures supporting open access (like the emergence of DOAJ as a key

⁵² RePec, <http://repec.org/>

⁵³ Laakso, M. Welling, P., Bukvova, H., Nyman, L., Bjork, B.C., Hedlund, T. (2011) The Development of Open Access Journals Publishing from 1993 to 2009, PLoS ONE, 6(6) e20961, <https://doi.org/10.1371/journal.pone.0020961>

⁵⁴ Frosio, F. (2014), op. cit.

index of open access journals and the wide use of Open Journal Systems software). Important steps have also been made in relation to licensing with the emergence of licenses suitable for open access journals, like the Creative Commons (CC) licenses. Open access has been further supported during this period through funder and institutional mandates and in particular through the acknowledgment of related costs as eligible and/or the creation (at institutional level) of related funding mechanisms.

3.2.2 Business Models

Open access is not cost free: associated costs are covered through a variety of business models, which are examined in the following paragraphs.

Article Processing Charges (APCs)

APCs are the most commonly used method for financing open access publishing. APCs are charged by open access journals, but can also be charged by subscription based journals to authors who want to make their publication available with open access. These journals are referred to as hybrid journals.

The introduction of APCs has important implications on the publishing landscape, as it changes the relationship of the key stakeholders involved. The use of APCs impacts on authors' choice of journals, while it also affects publishers' strategies, whose target group in financial terms is now the author and not the subscriber.

The use of APCs has led to the emergence of certain misconceptions. The most widely held ones are those supporting that most open access journals have APCs and that APCs are too high. Several studies over the past years have examined publication fees (either by surveying authors or by obtaining related information from journal websites) and provide interesting findings. Reporting from the SOAP project survey, Dallmeier-Tiessen et al. (2011) show that 12% of article authors had paid APCs themselves, while 31% had used part of their research funding to cover APCs even though this amount was not specifically intended for paying such fees. They also report that 50% of the respondents had published in open access without paying a related fee: the percentage of those who had not paid an APC is much higher in the humanities and social sciences

and significantly lower in life sciences.⁵⁵ A different study shows APCs to be significantly higher in professionally published journals than in journals published by learned societies, universities or scholars.⁵⁶

A more recent study looking into institutional spending on access publication fees in Germany reported the average payment at €1.298, with a total of 94% of the articles included falling within the €2.000 limit set by the DFG. The study also confirms the findings of a previous one, whereby APCs for hybrid journals are on average higher than those for fully open access journals. In an effort to increase transparency on publication fees, research funders like the Wellcome Trust and the Austrian Science Fund (FWF) have disclosed their expenditures, a practice also followed by Jisc.⁵⁷

A number of research funders and institutions have set up open access publication funds to assist researchers. To support further open access, the European Commission launched a pilot to fund open access publications arising from finalized FP7 projects through the OpenAIRE project. The launch of the pilot is strongly linked with both the Commission's Communication "Towards better access to scientific information: Boosting the benefits of public investment in research"⁵⁸ and the Commission's Recommendation "on access to and preservation of scientific information".⁵⁹ The pilot (known as the **FP7 post-grant pilot**) aimed to provide an additional instrument to make FP7 project results openly available by dedicating 4 million euros for this action. The pilot run from March 30th 2015 to April 30th 2017. Following careful consideration from the European Commission, OpenAIRE has been asked to extend the pilot for another ten months (until the end of February 2018).⁶⁰

⁵⁵ Dallmeier-Tiessen, S., Darby, R., Goerner, B., Hyppoelae, J., Igo-Kemenes, P., Jahn, D., Lambert, S., Lengerfelder, A., Leonard, C., Mele, S., Nowicka, M., Polydoratou, P., Ross, D., Ruiz-Perez, S., Schimmer, R., Swaisland, M., and van der Stelt, W. (2011) Highlights from the SOAP project survey. What scientists think about open access publishing, arXiv: 1101.5260

⁵⁶ Solomon, D. and Bjork, B.C. (2011) A study of open access journals using article processing charges, *Journal of the American Society for Information Science and Technology*, 63(8): 10.1002/asi.22673

⁵⁷ Jahn N. and Tullney, M. (2016) A study of institutional spending on open access publication fees in Germany, *PeerJ* 4: e2323 <https://doi.org/10.7717/peerj.2323>

⁵⁸ European Commission (2012b) Towards better access to scientific information: boosting the benefits of public investments in research, Brussels, COM(2012) 401 final, http://ec.europa.eu/research/science-society/document_library/pdf_06/era-communication-towards-better-access-to-scientific-information_en.pdf

⁵⁹ European Commission (2012a) op. cit.

⁶⁰ Franck, G. (2017) OpenAIRE FP7 Post-Grant Open Access Pilot: extension, <https://blogs.openaire.eu/?p=1880>

To benefit from the available funding, publications (journal articles, monographs, book chapters and conference proceedings) had to comply with specific criteria as determined by OpenAIRE.⁶¹ Considering the criteria and the timeframe, approximately 4.000 outputs (which equals to some 2% of overall FP7 publications) were considered as eligible. The mid-term evaluation of the pilot showed that as of November 30th, 2016 OpenAIRE had approved 700 funding requests, with 94% of them being requests for journal articles. In parallel, the evaluation highlighted the uneven uptake of the pilot which does not reflect the allocation of FP7 funding across EU member states, a fact which can be attributed to the different levels of institutional support provided and policy support.⁶²

In addition to the above action, from August 2016 the Pilot launched an instrument to provide economic support to open access journals and platforms which do not charge APCs. The maximum available budget was 200.000, which funded a total of 11 bids. To be eligible, journals or platforms had to comply with specific criteria.⁶³

Centralised funds

A different mechanism for funding APCs is through the operation of centralized funds. An example is **SCOAP3** (Sponsoring Consortium for Open Access Publishing in Particle Physics) a global partnership of 3.000 libraries, funding agencies and research institutions from 47 countries and international organisations. SCOAP3 pays for APCs, by redirecting funds and turning subscription journals in high energy physics to open access. The project was launched in 2014 and since then it supports 4.500 open access articles per year. The amount contributed by each country is based on its share of worldwide scientific output. Copyright stays with authors while the use of CC-BY licenses allows text and data mining.⁶⁴

⁶¹ These requirements were available through the OpenAIRE website, under the related section dedicate to the pilot <https://www.openaire.eu/postgrantoapilot>

⁶² Jonhson, R., et. Al. (2017) op. cit. Annex A

⁶³ De Castro, P. (2016) Funded Bids for the Alternative Funding Mechanism for APC-free Open Access Journals and Platforms, <https://blogs.openaire.eu/?p=1139>

⁶⁴ Sponsoring Consortium for Open Access Publishing in Particle Physics (SCOAP3) <https://scoap3.org/>

Turning to institutional level, the **University of Nottingham** set up in 2006 an open access central hub. The claimants of the fund over its first five years were from medical and life sciences, while the mean average cost per article in 2010-2011 was £1.216. Payments over the fund's first five year period have been made to 70 publishers. The usage of the fund has been growing -even though in 2011 it was reported that this was still at relatively low levels.⁶⁵

In 2016 the **National Library of Sweden** (through openaccess.se) and SwePub initiated a pilot project in cooperation with higher education institutions in the country looking into the possibilities of establishing an open national repository for APCs which will enhance transparency over the APC market.⁶⁶

Open access publishing infrastructures

In terms of infrastructures, publishers use either proprietary or open source software: among the latter the **Open Journal Systems (OJS)** is the most widely used one. As Tsoukala notes, the information available on the different platforms does not always provide a comprehensive picture of the full range of the services offered.⁶⁷ OJS is a journal management and publishing system developed by the Public Knowledge Project (PKP)⁶⁸ to expand and improve access to research.⁶⁹ OJS was released in 2001 as open source software. OJS aims at “making open access publishing a viable option for more journals, as open access can increase a journal's readership as well as its contribution to the public good on a global scale”.⁷⁰ In 2016 the OJS version 3.0 was launched. OJS is installed locally (and also controlled locally), while editors can configure the requirements, sections, review process etc. It supports online submission and management of all content. In addition, it provides subscription module with delayed

⁶⁵ Pinfield, S. and Middleton, C. (2012) Open access central funds in UK universities

⁶⁶ National Library of Sweden (2016) Open APC Sweden. A national open repository of publication costs for open access articles, http://www.kb.se/dokument/open%20access/Open_APC_Sweden_English_LAST.pdf

⁶⁷ Tsoukala, V. (2015) University based Open Access Publishing. State of Play, SPARC Europe, http://sparceurope.org/wp-content/uploads/2015/12/SE_UPublishing_Report_0315.pdf

⁶⁸ PKP was founded in 1998 by John Willinsky in the Faculty of Education at the University of British Columbia, Canada to improve the scholarly and public quality of research.

⁶⁹ Public Knowledge Project- Open Journal Systems <https://pkp.sfu.ca/ojs/>

⁷⁰ Ibid.

open access as an option. Comprehensive indexing of content is also part of the global system.⁷¹

In an effort to have a more precise picture regarding the number of journals using OJS, PKP undertakes an annual exercise to count the journals using OJS as their publishing platform. This is not as simple as it may sound as there is no requirement to register or inform PKP of the fact that OJS is being used. By developing an automated web crawling system, PKP was able to identify in 2015 32.000 journal instances. By filtering further, PKP was able to identify that half of these instances were not used and had no content. By applying what they identify as “somewhat arbitrary criteria” whereby an OJS journal was included if it had published at least 10 articles 8.286 journals were identified as using OJS for the management and/or publishing of their content for 2014. While these numbers should be considered as estimates as PKP may have missed some instances, the exercise shows an increase in the uptake of OJS throughout the years.⁷² This observation also highlights the expansion of a publishing environment based on open access and open software.

EKT eJournals Publishing Platform

EKT's ePublishing platform is an innovative service to support open access publishing in Greece. The platform enables the research community of the country to transition from a print-only mode of work to online working environments and enhance the visibility and impact of their research outputs. Emerging within an ecosystem with no prior experience or open access oriented culture, it enables the cultural shift towards open and collaborative scientific practices and the open science/open access paradigm. EKT eJournals is in full alignment with EKT's strategy of providing open access infrastructures and services to stakeholders in Greece, free of charge and is the main electronic publishing infrastructure of this type at national level.

The eJournals platform is based on EKT's successful collaboration with non-profit research organisations and scientific societies focusing primarily – but not limited- on the Social Sciences and Humanities. The development of the service has been made possible through the use of structural funds. The service was launched in 2007, initially as an ejournals platform providing access to scientific content by collecting, storing and distributing to the scientific community research outputs.

⁷¹ Ibid.

⁷² <https://pkp.sfu.ca/ojs/ojs-usage/>

Since then, it has developed further and currently hosts three distinct platforms for journals, monographs and conference proceedings.

eJournals uses OJS version 2.4.8 and currently hosts more than 7.500 articles from 27 publishers. The platform provides a wide range of services to publishers including among others web hosting, online management of the publishing process, OJS training, technical support, helpdesk service, consulting services in producing guidelines and policies aligned with current international developments, and usage statistics. In addition, it provides persistent identifiers and indexing services which significantly increase online availability and visibility of high quality Greek content and enhance the impact of research published in Greece. Articles are available in pdf format. All journals provide immediate open access to their content with the exception of two which provide delayed open access. Articles are licensed under a Creative Commons Attribution Non-Commercial License allowing others to share the work with an acknowledgement of the work's authorship and initial publication in this journal. All services are offered free of charge.

The journals platform is fully compatible with OpenAIRE Guidelines for Literature Repository Manages (OpenAIRE Basic DRIVER OA) and thus papers are visible via the OpenAIRE portal.

Source: <http://epublishing.ekt.gr/en/5695>

Hrčak is the central portal of Croatian scientific journals. It currently hosts 429 journals and 161.134 journal articles (155.602 articles with full text) in the following areas: natural sciences, technical sciences, biomedicine and healthcare, biotechnical sciences, social sciences, humanist sciences, art, interdisciplinary areas of knowledge and interdisciplinary fields of art. The portal was developed with the support of the Ministry of Science, Education and Sport; it is developed and maintained by the SRCE-University of Zagreb, University Computing Centre and was initiated by the Croatian Information and Documentation Society. The platform is fully compatible with OpenAIRE Guidelines for Literature Repository Managers 3.0 and thus papers published in the platform are visible via the OpenAIRE portal.⁷³

In Turkey TUBITAK ULAKBIM provides online hosting services and workflow management system for academic journals through the Dergi Park (Journal Park) platform. **Dergi Park** was launched in September 2013 to improve the quality and

⁷³ Hrcak- Portal of Scientific Journals of Croatia, <http://hrcak.srce.hr/> accessed 6 April 2017.

support academic publishing in Turkey, to enhance the visibility and usage of national academic journals and to ensure the implementation of the ULAKBIM journal management system efficiently. The platform hosts peer-reviewed academic journals published in Turkey in the following subjects: social sciences and humanities, engineering and basic sciences, health sciences, life sciences, law and sport sciences. The platform hosts already published journals but also welcomes new ones. A “Participation Contract” is signed between the two parties, i.e. Dergi Park and each participating journal to protect mutual rights. All services offered are free of charge. The number of journals included in Dergi Park was in January 2017 1.424, yet no information is provided at an aggregate level on the number of those providing full access to their content, but rather this information can be found on a journal level basis. As the total number of journals published in Turkey is estimated at 2.300, Dergi Park aims to expand so as to be able to cover all of them.

At its initial phase Dergi Park used OJS; yet, this became inefficient as the number of journals increased. A new system –ULAKBIM Journals System (UJS)- has been developed to be compatible with new technologies and enable easier handling and faster workflow. The new system has been put into service since 2017. For articles in Dergi Park to be assigned a DOI (digital object identifier), journals need to at least meet one of the following requirements: be indexed in TR Index, WoS or Scopus, be included in DOAJ, and manage all the publishing process from submission of manuscripts to publication within the Dergi Park system. In March 2017, the number of journals having been assigned a DOI was 319.⁷⁴

Open Edition uses **Lodel**, an open source software for academic electronic publishing. Documents to be published through Lodel may be prepared locally with a word-processor (MS Word, OpenOffice) or directly edited online. Lodel converts automatically Word or OpenOffice documents to XML/TEI by means of models. Lodel is particularly respectful of scientific edition conventions, such as footnotes, the structure of the text, the different character sets corresponding to non-latin languages, diacritical signs, small capitals, hard spaces. The software facilitates uptake of digital

⁷⁴ Dergi Park, <http://dergipark.gov.tr/page/about>

publishing practices by editorial staffs, enabling them to upload the journal on their own, without having to rely on computer specialists.⁷⁵

Further important open access initiatives outside Europe are SciELO and Redalyc. **SciELO's** (the Scientific Electronic Library Online) regular operation was launched in 1998 following a one-year pilot project. The initiative was launched four years before the Budapest Declaration which is regarded as a landmark in the development of the open access movement. SciELO's aim was twofold: to create the infrastructure and capacities for publishing on the web selected Brazilian peer-reviewed journals from a variety of disciplines, and to increase the visibility, use and impact of indexed journals. The network currently covers 15 Ibero-American countries and South Africa. The majority of journals are managed by scientific societies or academic institutions and in some rare occasions by commercial publishers. By 2016, the network had published more than 400 thousand articles, receiving 1.5 million downloads per day and thus making SciELO the major DOAJ provider. Over the years, both the publishing and interoperability functions have been improved on the basis of new methodologies and technologies in scholarly communication. Notwithstanding its importance, the main weakness of SciELO is related to the low impact of its journals as measured by citations.⁷⁶

Redalyc (Red de Revistas Cientificas de America Latina y el Caribe, Espana y Portugal) is a bibliographic database and digital library of open access journals supported by the Universidad Autonoma de Mexico. Redalyc provides access to 1200 scientific journals and more than 535.000 full text articles from the social sciences, arts and humanities and sciences from 22 Ibero-American countries and published by more than 500 institutions. The majority of journals covered are from the social sciences (705 journals) followed by sciences (349 journals).⁷⁷

⁷⁵ OpenEdition, <https://www.openedition.org/10905>

⁷⁶ Packer, A.L., Cop, N., Luccisano, A., Ramalho, A., Spinak, E. (2014) SciELO: 15 Years of Open Access. An analytical study of Open Access and Scholarly Communication, Paris: UNESCO, 2014, 186 p. ISBN 978-92-3001-237-3. Available from: <http://dx.doi.org/10.7476/9789230012373>.

⁷⁷ Redalyc- <http://www.redalyc.org/home.oa>

3.3 Data Publishing in SSH

The increasing interest of the publishing community towards open access has more recently encompassed open (research) data and has led to the emergence of new publishing products: data journals. Data journals are community peer-reviewed open access platforms for publishing, sharing and disseminating data that cover a wide range of disciplines. As their primary purpose is to expose datasets, data papers contain information on the acquisition, methods, and processing of specific data sets. The published papers are cross-linked with approved repositories, citing data sets that have been deposited in such repositories or data centres.

Despite the existence of different requirements for submission, review and publication, the Australian National Data Service (ANDS)⁷⁸ points to a number of requirements that seem to be quite common among data journals:

- Deposit of data in an approved repository with specific metadata description and with guidelines on file format and size
- Citation and identifiers: journals may require a digital object identifier (DOI) or other persistent identifier and may also define or recommend specific data citation format
- Researcher profile: journals may require information on author affiliation or other information on their research profile
- Copyright and licensing: in addition to copyright licensing issues for data may also be asked

Data papers are of particular importance to researchers for whom research data is a primary research output, as they provide academic accreditation for data scientists, but also as the publication cycle is usually shorter than that of a traditional journal. Like traditional journals, data journals also have impact factors, while a number of them also support “altmetrics”⁷⁹ which track the number of views, downloads, social media “likes” and “recommendations”, ultimately enhancing further data publication.

⁷⁸ Australian National Data Service- Data and Service, <http://www.ands.org.au/working-with-data/publishing-and-reusing-data/data-journals>

⁷⁹ Altmetrics is the study and use of scholarly impact measures based on activity in online tools and environments.

As the RECODE project pointed out (Tsoukala et al. 2015),⁸⁰ STEM publishers were the first to acknowledge the significance of open access to research data and have supported open access to research data through the adoption of mandatory policies that require authors to deposit the underlying data in certified repositories and make them openly available. This interest of STEM publishers has also been translated in the emergence of data journals.

Yet, data journals also exist in SSH. Ubiquity Press, an open access publisher, is among the publishers with a number of data journals in the SSH.

The Journal of Open Archaeology (JOAD)

The Journal of Open Archaeology (JOAD), published by Ubiquity Press, features peer-reviewed data papers with high reuse potential. Datasets should be deposited in a data repository under an open license (such as creative commons zero). The journal applies a peer review process to all submitted data papers against two criteria: the paper content and the deposited data. According to the journal, the former is about providing information regarding the creation and re-use of the dataset as well as a description of the dataset, while the latter is among others about the submission of data to a repository with a sustainability mode, its licensing

The journal provides a list of recommended repositories (international, national and institutional) that meet its peer review requirements and are recommended for the archiving of JOAD datasets.

Source: <http://openarchaeologydata.metajnl.com/>

The Journal of Open Psychology Data (JOPD)

The Journal of Open Psychology Data (JOPD), published by Ubiquity Press, collaborates with a number of repositories to ensure that the associated metadata are professionally archived, preserved, and openly available. The journal provides a list of recommended repositories (international, national and institutional) that meet its peer review requirements and are recommended for the archiving of JOPD datasets. Data papers are peer-reviewed to ensure they are accurate and meet the journal's criteria. According to the journal's editorial policy, authors must provide under the review section both concrete and useful suggestions for the reuse of the data.

For datasets to be actionable, the journals states that if a software or other tool is used to make data interpretable this should also be archived and accessible.

Source: <http://openpsychologydata.metajnl.com/>

⁸⁰ Tsoukala, V., Angelaki, M., Kalaitzi, V., Wessels, B., Price, L., Taylor, M.J., Smallwood, R., Linde, P., Sondervan, J., Reilly, S., Noorman, M., Wyatt, S., Bigagli, L., Finn, R., Sveinsdottir, T., Wadhwa, K. (2015) Policy guidelines for open access and data dissemination and preservation, RECODE project, Deliverable D5.1, February 2015, <http://recodeproject.eu/wp-content/uploads/2015/02/RECODE-D5.1-POLICY-RECOMMENDATIONS- FINAL.pdf>

3.4 Monographs

3.4.1 The evolving landscape of open access monographs

Monographs and monograph publishing in particular have also been affected by the changes observed in scholarly communication. As in the case of journals, digital technologies have created new avenues for sharing and using available knowledge that monographs can profit from. Digital publications increase access and thus discoverability of monographs, while open access has opened up channels for the development of new business models which build on those of open access journals. These new opportunities have in turn raised important issues in terms of the extent at which the current publishing model responds effectively to this new and evolving ecosystem.

Before examining the monograph publishing landscape it is important to define what a monograph is. A monograph can be defined as a long, academic and peer-reviewed work on a single topic usually written by a single author. The term “monograph” can also include edited collections by multiple authors. The interest in studying monograph publishing stems from the fact that monographs along with other long forms of research publications -like edited books- have an important place within many disciplines and in particular in arts, humanities and social science. As a long form of publication, they offer the space and length for a full examination of a topic and the presentation of ideas that could not necessarily fit within a journal article. Monographs are therefore important channels for researchers to communicate their research outputs and their work more generally and also important in shaping the careers of academics. As highlighted by OAPEN (2013:7) “[this] long form of communication remains an essential part of the scholarly landscape in the humanities and social sciences (HSS)... [and] important career makers for academic seeking work”.

The arguments for supporting open access monographs relate to the declining sales of monographs (also referred to as the monograph crisis), the increasing number of open access mandates from research funders and the increasing need of researchers (especially from the SSH) to showcase the public impact of their work.⁸¹ Open access monograph

⁸¹ Gatti, R. and Mierowsky, M. (2016) Funding Open Access Monographs, A coalition of libraries and publishers, *College and Research Libraries*, 77(9): 456-459
<http://crln.acrl.org/index.php/crlnews/article/view/9557/10902>

publishing is seen as the solution to the declining position of conventional publishing models as a result of rising production costs and the increasing pressure on budget libraries.⁸² According to Gatti and Mierowski (2016) while the conventional model remains successful, when looking into the profits of publishers, declining sales mark the model's failure in relation to the dissemination aspect. The HEFCE report (2015) takes a more cautious stance arguing that the picture in the UK does not suggest a decline in the position of the monograph. On the basis of this observation, the report argues that related arguments should have a broader and more positive foundation. The same report notes two further important points. First, that lack of usage over a short timescale is not necessarily an adequate indication of whether a particular book should have been acquired. Second, that university libraries despite their importance are not the only customers for monographs.⁸³ The case for open access monographs needs therefore further consideration of issues like the business models proposed and their implications for the academic community, licensing (as many rely on material protected by copyright) and the wider implication for different stakeholders in the ecosystem.

Despite the opportunities offered by technology and the functional limitations of the print book, electronic publishing of monographs is still not as widespread as journals. Martin Paul Eve (2014) argues that these social and technological barriers which differentiate monograph from journal publishing may be over-stated; nonetheless he notes that the transition to open access monograph publishing should ensure the preservation of those aspects of monographs which are seen as of most use/ importance to scholars.⁸⁴ Early initiatives have focused on releasing out-of-print books openly as part of retrodigitization initiatives with print-on-demand options, to digitally born new monographs in open access and new university press and library press initiatives. OpenEdition⁸⁵ for instance –through its OpenEdition Books platform- offers a digitization and XML encoding support programme. The platform aims to build an international library and encourage

⁸² Ferwenda, E. Snijder, R., Adema, J. (2013) OAPEN-NL. A project exploring Open Access monograph publishing in the Netherlands, Final Report <https://www.oapen.org/content/reports#OAPEN-NL>

⁸³ Crossick, G. (2015) Monographs and Open Access. A report to HEFCE. <http://www.hefce.ac.uk/pubs/rereports/year/2015/monographs/>

⁸⁴ Eve, M. P. (2014) Open Access and the Humanities, Cambridge, Cambridge University Press, <https://doi.org/10.1017/CBO9781316161012>

⁸⁵ The OpenEdition business model will be discussed more extensively in the following section.

the development of open access in the long run. It currently contains 3.800 books from 67 publishers in SSH.⁸⁶

The increasing interest in making monographs open access is strengthened further by initiatives and mandates from research funding organisations. The European Commission through its Horizon 2020 programme and its open access mandate is a prominent example. According to the mandate, “under Horizon 2020, each beneficiary must ensure open access to all peer-reviewed scientific publications” relating to the project’s results”.⁸⁷ While the dominant type of publication within the scope of the Commission’s mandate is the journal article, “[g]rant beneficiaries are also strongly encouraged to provide open access to other types of scientific publications including monographs, books, conference proceedings, grey literature”.⁸⁸ The European Research Council (ERC) open access guidelines recommend the OAPEN Library as a repository for monographs and book chapters.⁸⁹

At a national level, UK funding bodies have recently issued a statement to extend open access policy to include monographs by the time of the third Research Excellence Framework (REF) in the mid-2020s.⁹⁰ Annex C on open access and monographs of the Consultation on the Second Research Excellence Framework clearly acknowledges the importance of open access monographs by stating that “in the long term, however, we want to see the benefits that open access has brought to journal articles extended to other research outputs, including monographs”.⁹¹ The interest in open access monographs is further supported by the HEFCE report on the subject. Focusing on the UK experience, the report discusses the policy implications, acknowledging at the same time that the UK

⁸⁶ OpenEdition Books. <http://books.openedition.org/>

⁸⁷ European Commission (2017) H2020 Programme. Guidelines on Open Access to Scientific Publications and Research Data in Horizon2020, version 3.2, 21 March 2017, p. 5 http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf

⁸⁸ Ibid, p. 5-6.

⁸⁹ ERC (2016) Open Access Guidelines for research results funded by the ERC, revised February 2016 https://erc.europa.eu/sites/default/files/document/file/ERC_Open_Access_Guidelines-revised_feb_2016.pdf

⁹⁰ Martin Paul Eve (2017) The starting pistol has been fired- now it the time to heed the drive towards open access books. LSE Impact blog, 7 March 2017, <http://blogs.lse.ac.uk/impactofsocialsciences/2017/03/07/the-starting-pistol-has-been-fired-now-is-the-time-to-heed-the-drive-towards-open-access-books/?platform=hootsuite>

⁹¹ HEFCE (2016) Consultation to the second Research Excellence Framework, December 2016/36 http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/2016/201636/HEFCE2016_36.pdf

does not act in isolation. On the basis of this point, the report should (also) be regarded as a contribution to related debates and practices.⁹² In contrast to HEFCE, the Wellcome Trust already includes in its open access mandate books and book chapters that have been authored or co-authored by the Wellcome Trust grant holders. The latter are required to make these outputs available through PubMed Central Bookshelf or Europe PMC as soon as possible with a maximum embargo of six months. The preferred license is CC-BY, nonetheless the Wellcome Trust also accepts CC-BY-NC and CC-BY-NC-ND.⁹³ Moving beyond Europe, the Australian Research Council requires open access to any publication arising from an ARC supported project (which also covers books and book chapters).⁹⁴

OAPEN⁹⁵ (Open Access Publishing in European Networks) project (2008-2010) co-funded by the EU is a further initiative aimed at achieving a sustainable publication model for academic books in the SSH and improving the visibility and usability of high quality academic research in Europe. Following the completion of the European project OAPEN operates as a foundation (non-profit organization). The foundation has been established by the University of Amsterdam, the University of Leiden, the university Library of Utrecht University, the Netherlands Academy of Sciences (KNAW), the National Library of the Netherlands, and Amsterdam University Press.⁹⁶ OAPEN currently operates two platforms: OAPEN Library and the Directory of Open Access Books (DOAB). The OAPEN Library hosts 2.500 publications from more than 100 publishers from 18 countries. The services provided relate to quality assurance, aggregation of publications, digital preservation and dissemination. As seen in the previous section, OAPEN is also currently managing DOAB, a discovery service for

⁹² Crossick, G. (2015) op.cit.

⁹³ The Wellcome Trust. Complying with our open access policy.

<https://wellcome.ac.uk/funding/managing-grant/complying-our-open-access-policy>

⁹⁴ Australian Research Council (2015) Open Access Policy, version 2015.1,

http://www.arc.gov.au/sites/default/files/filedepot/Public/Policy%20&%20Strategy/ARC%20Open%20Access%20Policy/ARC_Open_Access_Policy_V2015.1_17Aug15.pdf

⁹⁵ Martin Paul Eve notes that the leading studies in open access monographs (OAPEN-NL, OAPEN-UK, Jisc Collections and the HEFCE monograph investigation) have been produced by stakeholders with an interest in open access.

⁹⁶ OAPEN (Open Access Publishing in European Networks).
<http://www.oapen.org/content/organisation>

open access books, which currently lists 7.824 academic peer-reviewed books and book chapters from 205 publishers.⁹⁷

Building on the European OAPEN project two additional ones have been set up: OAPEN-NL and OAPEN-UK. The OAPEN-NL aimed at gaining experience with the publication of open access monographs in the Netherlands. The project sought to do so by publishing 50 monographs (from 9 publishers) in open access in a variety of subjects and collecting data on usage, sales and costs. The project concluded that while “no significant effect of Open Access on monograph sales could be found” there was significant increase in digital usage, that there was no observed citation benefit to a book being open access and that the open access edition was cheaper to produce than the total cost of a conventional monograph. Eve (2014) notes that these findings could be interpreted in different ways: the absence of effect could be justified by the low embeddedness of the open access route, while the absence of citation benefit by the long publishing cycles observed in the humanities in contrast to the short period of the report. As a consequence, the author sees these results more as an interesting and valuable starting point.⁹⁸ The project’s results have fed-in the recommendations’ report that targets key stakeholders in the academic book publishing like funders, libraries, publishers, authors and aims at improving open access for monographs.⁹⁹

OAPEN-NL Overall Recommendations

- Monographs (peer reviewed academic books), particularly books that are the result of publicly funded research, should be made available in an Open Access edition.
- Funders and libraries should accept CC-BY-NC licenses, to allow publishers to sell premium editions.
- Funders and libraries with a preference for Open Access deposit (Green Open Access) should allow a reasonable embargo period, to allow publishers cost recovery of publications.
- Funders and libraries with Open Access publication funds should require transparent fee structures for publication charges.

⁹⁷ DOAB (Directory of Open Access Books). <http://www.doabooks.org/>

⁹⁸ Eve, M. P. (2014) op. cit., p. 124

⁹⁹ Ibid.

- Funders and libraries with policies for Open Access monographs should encourage or require deposit in a central, dedicated repository for monographs.
- There remains a need for awareness building and further education and dissemination of information about Open Access publishing. Continued advocacy towards authors and other stakeholders by funders, publishers and libraries as well as by authors themselves is needed to battle the misconceptions that exist about Open Access publishing

Source: Ferweda, E., Snijder, R., Adema, J. (2013) OAPEN-NL. A project exploring Open Access monograph publishing in the Netherlands. Final Report.

The second project, OAPEN-UK gathered evidence to support stakeholders in making informed decisions on the future of open access scholarly monograph publishing. According to the OAPEN-UK Report¹⁰⁰ the transition towards open access monographs requires changes in three areas: attitudes and perceptions; systems, policies and processes; business models. With regard to the first area the report provides some interesting insights: while author interviews confirm their positive attitude towards open access publishing, there is considerable variation in terms of their views on who would benefit from increased access, how open access would be implemented and the benefits and costs involved for other players. Attitudes are also shaped by the career stage of each researcher and his/her previous experiences of publishing. In addition, the report notes that the same misconceptions regarding open access journals are found in the case of open access monographs which relate to their perceived lower standard (in comparison to traditional print monographs). The project's final report also provides a set of recommendations grouped in three categories: a) supporting informed decision making by all stakeholders, b) taking collaborative action and c) enabling projects, research and experimentation.¹⁰¹

Jisc has also published a report on the basis of the results of a project that aimed to explore potential future services to support open access monograph publishing. The

¹⁰⁰ Milloy, C., Collins, E. (2016) OAPEN-UK Final Report. A five-year study into open access monograph publishing in the humanities and social sciences, Jisc. <http://open-uk.jiscbooks.org/files/2016/01/OAPEN-UK-final-report.pdf>

¹⁰¹ Ibid.

recommendations highlight the need for good practice guidelines on various aspects of open access book publishing that seem of particular interest to publishers, especially new university presses (but also conventional ones), the importance of setting up a central workflow for aggregating books which would also enable improvements (like adding DOIs or ORCIDs) and the need to catch up in the area of altmetrics.¹⁰²

3.4.2 The costs of Monographs

The support for open access monographs is further complicated by the costs incurred in such process as “publishing involves more than simply releasing a digital file onto the web”.¹⁰³ These costs may include administering peer-review, editing, typesetting, copyediting etc. which “are not fixed, nor are they particularly well known”.¹⁰⁴ Nonetheless, a number of studies have tried to shed light on these costs showcasing how challenging this task can be.¹⁰⁵

OAPEN has estimated the average cost for creating a monograph in the Netherlands to be slightly over € 12.000. Half of the amount is spent on creating a first digital copy, while a third of the total cost is spent on printing and binding paper copies. This amount is based on the budgets of 50 books, published by 9 different publishers.¹⁰⁶ A more recent study from ITHAKA S+R looking at 382 titles from 20 presses members of the Association of American University Presses found costs to range from \$ 15.140 to \$ 129.909. According to the study, the largest cost item relates to staff time especially time devoted to activities of acquisition, which seems to be a core activity closely linked to reputation and thus least likely to be outsourced. A further important finding suggests that presses on good financial status are those who tend to be larger and with multiple streams of revenues a factor which allows them to cross-subsidize their monographs either through their journals list like in the case of Chicago Press, or through their textbook programme like the Yale University Press.¹⁰⁷ As Moore (2016) argues, the high

¹⁰² Jisc (2016) Investigating OA monograph services: Final Report, <https://www.jisc-collections.ac.uk/Global/Investigating%20OA%20Monograph%20Services/Jisc-OAPEN%20pilot%20Final%20report.pdf>

¹⁰³ Moore, S. (2016) Open Access Monographs. PASTEUR4OA Briefing Paper. <http://dx.doi.org/10.5281/zenodo.51853>

¹⁰⁴ Ibid.

¹⁰⁵ Related studies include those by Walters and Hilton (2015) and Eve (2014).

¹⁰⁶ OAPEN (2013) op. cit.

¹⁰⁷ Maron, N., Mulhern, C., Rossman, D., Schmelzinger, K. (2016) The Costs of Publishing Monographs. Towards a Transparent Methodology, ITHAKA S+R, <https://doi.org/10.18665/sr.276785>

costs reported may be related to marketing and commissioning and the expected economic return.¹⁰⁸

Rupert Gatti from Open Book Publishers (OBP)- the biggest open access academic publisher in the UK- in a recent blog estimated the average cost per title to be around \$10.500 with the largest share of the cost (60%) being devoted to title set up. This covers staff costs and everything else that is part of the daily activities. The rest of the cost covers the cost of sales, distribution and overheads. The estimates are based on data gathered from 18 books published between September 2014 and August 2015.¹⁰⁹

In calculating the cost of monographs attention should be given to the differences in the definitions of costs, the inclusion of data from different publisher types as well as national market differences etc. which can lead to significant deviations in the numbers provided.

3.4.3 Business models for open access monographs

The HEFCE *Monographs and Open Access* project identified a total of six business models: traditional publisher, new university presses, mission-oriented OA, freemium OA, aggregator/ distributor and author payment model. In proposing this taxonomy the report acknowledges the difficulties associated with identifying models due to (among other) the ongoing experimentation which characterizes the field and the fact that this is still a market in its early stages of development.¹¹⁰ The HEFCE reports assessed the different models according to the following criteria: quality, sustainability, dissemination, diversity, innovation and integrity. Quality is an aspect taken seriously by all publishers as, on the one hand, it increases credibility to academics while, on the other hand, it impacts on the long-term sustainability of a publisher. Sustainability has different implications for the different models: it can create long term challenges for New University Presses and mission oriented presses as funds are not always easy to secure in the long term, while freemium models seem to be in a more advantaged position which

¹⁰⁸ Moore, S. (2016) op.cit.

¹⁰⁹ Rupert Gatti (2015) "Introducing Some Data to the Open Access Debate: OBP's Business Model" <http://blogs.openbookpublishers.com/tag/ruPERT-gatti/>

¹¹⁰ London Economics (2015) Economic analysis of business models for open access monographs. Annex 4 to the Report off the HEFCE Monographs and Open Access Project <https://londonEconomics.co.uk/blog/publication/economic-analysis-business-models-open-access-monographs/>

is nonetheless linked with the extent at which authors will want something more than basic open access. Turning the focus on the dissemination aspect, the report argues that while more established publishers might be more advantaged, the increase in the sophistication of search engines and web discovery tools might help smaller publishers. Innovation is also expected to be promoted through certain models. The study does not provide any firm conclusion in relation to the effects of open access models on the diversity of the publishing landscape. Finally, it concludes that none of the models is likely to damage the integrity of the system.¹¹¹

New University Presses (NUP)

New university presses account for the majority of open access monograph publishing. Their establishment aims at filling the gap between professional publishing activities and digital repositories providing infrastructure. A common element of these initiatives is their close relationship with institutional libraries and their strong commitment to open access publishing.¹¹² NUP see themselves as providing an outlet for certain types of research and as enabling researchers to publish their research outputs with institutional support. At the same time though, NUP entail an entrepreneurial component as universities can profit through charging author fees¹¹³ (to those outside the university), while increasing the university's visibility and thus its capacity to attract further funding and collaborators.

As in the case of the traditional publishing model quality is strongly linked with institutional prestige (the higher this is, the easier it becomes to attract authors and disseminate books). Publicity becomes important though it can lead to what is referred to as “vanity publishing” which can have adverse effects on quality. An additional important factor that NUP need to consider is the balance between encouraging academics within the institution to publish with the press while maintaining their

¹¹¹ Crossick (2015) op. cit.

¹¹² Bargheer and Schmidt (2008) Gottingen University Press: Publishing services in an open access environment, *Information Services and Use*, 28(2): 133-139

¹¹³ For academics within the institution the related costs are covered through library or research funds dedicated to this purpose.

attractiveness/ appeal to those outside the institution (and thus minimize any perceptions about favoritism towards affiliated researchers).¹¹⁴

Within the OPERAS network, **Gottingen University Press** is a typical example. Gottingen University Press was established in 2003 as a service of the Gottingen State and University Library and is part of the Electronic Publishing department. The press offers innovative services primarily to the members of Gottingen University and covers a wide range of disciplines (sciences, life sciences, SSH). It is managed by an editorial board made of the representatives of the various faculties and the University Medical Centre Gottingen. The press publishes within two categories: the “Universitätsdrucke” and the “Universitätsverlag”: the former does not entail any review of the content (even though quality control is still performed for typesetting, layout and image quality) while the latter is reserved for publications of high quality which undergo a review process. Notwithstanding the differences in each publication type, there seems to be a trend for “hybrid” publications which combine open access publishing with print on demand. Regarding author’s rights, the press leaves authors and editors as many rights as possible. In terms of the business model chosen this is based on a cost-recovery approach.¹¹⁵

Beyond the EU, important initiatives can be found in Australia. The **Australian National University Press** (ANU)¹¹⁶ is among the most known. It was established in 2003 to explore and enable new scholarly publishing, making it the first Australian primarily electronic academic publisher. The primary focus of the press is the production of scholarly works. Submitted manuscripts (following initial consideration from the Editorial Board who examines the extent at which the proposal is of interest) undergo a double blind peer-review with at least two referees and at least one of them being external to ANU. The e-books are available in a range of formats (pdf, epub, html). All works are also available for purchase through the print on demand service. All the above formats are generated from a single source file xml. In 2014, ANU Press celebrated its 500th title.¹¹⁷ The **Monash University Press** is a further interesting

¹¹⁴ London Economics (2015) op. cit.

¹¹⁵ Bargheer and Schmidt (2008) op. cit.

¹¹⁶ Originally established as ANU E Press it changed its name to ANU Press in 2014 to reflect the changes in the publication industry.

¹¹⁷ Australian National University. About ANU Press. <https://press.anu.edu.au/about/about-anu-press>

example as it is hosted in Australia's largest university. It publishes mainly in the social sciences and humanities following a rigorous process of peer review. Books are available in an e-book format, while print versions are also available for purchase.¹¹⁸

Mission-oriented OA

The mission-oriented open access is related to the belief that the monograph crisis calls for some form of intervention which could entail funding for open access or be part of a broader approach in relation to the role of monographs in tenure decisions. In a number of related initiatives one can discern what could be called a “by academics for academics” approach: under this model the available formats are usually the basic (html and pdf), with only a few added services available. Emphasis is placed on quality assurance as an essential component for establishing and maintaining credibility and less on aspects like dissemination, marketing and preservation. What is of equal importance is the absence of a clear funding mechanism raising important issues in terms of quality and long-term sustainability. As pointed out in the London Economics report “while starting an open access publishing operation is relatively easy, growing it into a sustainable operation is not” and this is even more relevant in the case of mission-oriented open access.

Freemium Open Access

Under this business model, the open access versions of monographs are available alongside the premium version for a price. In practice, almost all open access book publishers use some form of hybrid model by providing an open access edition and offering other editions/ features for sale. The most common among these extra features is the print-on-demand, but it can also include hypermedia, social features etc. This model implies a distinction between what is regarded as “core” and what is seen as a “value added service”. The distinction is not fixed and is expected to change over time as a result of many factors, changes in technology being one of them. As most readers still prefer a printed version for longer texts, the e-book is not expected to substitute the printed book in the same way as e-journals have substituted printed journals.¹¹⁹

¹¹⁸ Monash University Publishing. About Monash University Publishing.

<http://www.publishing.monash.edu/about.html>

¹¹⁹ Ferwerda, E. (2014) Open access monograph business models, *Insights*, 27(s), 35-38,

<http://dx.doi.org/10.1629/2048-7754.46>

A typical example of the freemium model is the **OECD Publishing**: OECD makes all its publications available for free in html form, while those interested in acquiring other forms can do so by buying the premium editions and services enabling the recovery of all costs. The **Open Edition Freemium** is a programme for the development of open access academic publishing in SSH. The programme is offered exclusively to institutions (libraries, campuses, research institutes) with the aim to create an innovative and sustainable publishing model. The Open Edition Freemium is comprised of two strands: one for books and one for journals. In the case of books acquisition provides permanent access to pdf and epub versions. Books can be purchased on an individual basis or in bundles.¹²⁰ **Athabasca University Press** in Canada is a further interesting example. Athabasca University has been the first in Canada to establish an open access scholarly press. Access to all titles is free over the internet, and whenever possible the publications are licensed with Creative Commons, while print versions are also available for sale.¹²¹

Aggregator/ Distributor

Aggregators focus more on the technical aspects through functions like aggregation, distribution, quality assurance, discovery and preservation aimed at increasing availability and discoverability.

Aggregators both complement publishing and also work with other aggregators and/or service providers to enhance visibility and discoverability. In addition, they can also be considered as standard setters, especially when it comes to issues like licensing arrangements or technical upgrades. In the case of aggregators one has to take into consideration the fact that they can end up operating like a “tipping market” dominated by a single one with adverse effects on competition and innovation. A further point to be considered relates to the fact that their operation requires significant investments both in personnel and infrastructure of upfront nature.

Focusing on the funding side, **Knowledge Unlatched** (KU) supports open access monographs in SSH by collecting funds from libraries to pay publishers. In this way the cost is reduced for libraries participating in the project in comparison to the purchase

¹²⁰ Open Edition Freemium for Books. <http://www.openedition.org/13052>

¹²¹ Athabasca University Press. <http://www.aupress.ca/index.php/about/openaccess>

of single print copies and/or e-books. The initiative not only offers opportunities for reducing costs but also for expanding readership. The KU Select 2016 includes 343 titles from 54 publishers with 269 having pledged their support.¹²² **Luminos**, which is the University of California Press new open access program for monographs is a further example: it is based on a partnership where costs and benefits are shared. Membership fees from participating libraries go towards the cost of publication.¹²³

Author Payment

Under this model, costs (known as author publication charges) are recovered from authors or their host/ funding organisations. While the risk for the publisher is reduced as the cost is shifted to the author, this practice can place researchers from institutions with limited financial capacities in a disadvantaged position.

4. Open Peer Review

Open Peer Review (OPR) is the buzz word of the moment in the scholarly communication sector. Even though it remains quantitatively marginal compared to “traditional peer review” (blind review) in the academic sector, there is a growing literature on the subject and more discussions about it in the scientific conferences than in the past. It has been extensively discussed, for example, during the 20th International Conference on Electronic Publishing, where Göttingen University team presented surveys, initiatives and experiments in different disciplines¹²⁴. This was one of the outcomes of a dedicated task in OpenAire2020 project.

In discussing open peer-review two points should be acknowledged. First, that the term “open peer-review” is not limited to one specific practice of open reviewing, but captures instead a family of practices.¹²⁵ In its simplest form it is about conducting the review traditionally, and then releasing publicly the name of the reviewer and the review. Other forms are more interactive and open: in these cases, comments are made

¹²² Knowledge Unlatched. <http://www.knowledgeunlatched.org/ku-collections/ku-books/>

¹²³ University of California Press. Luminos. <http://www.luminosoa.org/>

¹²⁴ OpenAIRE. “Openaire’s Experiments in Open Peer Review / Report”. Zenodo, September 22, 2016. doi:10.5281/zenodo.154647

¹²⁵ Ross-Hellauer, T. “Defining Open Peer Review: Part One – Competing Definitions”, 30 October 2016, <https://blogs.openaire.eu/?p=1371>

on the draft version of the manuscript immediately upon its release. Comments can be made either by several reviewers or anyone wishing to review the manuscript before publication. In that case OPR tends to be crowdsourced reviewing. The combination of OPR with annotation and commenting features that comes with web publishing gives way to conversational reviewing by creating conversation threads around papers. In some cases, the open conversation can be combined with traditional reviewing; this is “post publication peer review”, sometime named also “open peer comment”.

The second point is that the emergence and expansion of OPR within the academic sector has been fueled by growing concerns in the last years about scientific integrity. Surveys show that retraction rate in scientific publications is growing due to a growing number of mistakes, frauds and sometimes hoaxes that remain unnoticed throughout traditional reviewing process¹²⁶. The growing number of papers to be reviewed, the growing complexity of data to be verified before validating a paper, but also the growing competition between research teams that pushes them to publish more often and more quickly than in the past put pressure on the traditional reviewing system and make it more and more obsolete in the new environment. For some commentators, OPR can help fixing what appears to be a broken scientific system.

The development of OPR in the scholarly communication system must be contextualized with the development of the open science paradigm¹²⁷. Open Science means not only opening the access to publications and data, but also the whole scientific workflow to obtain more transparency and reliability of the research results. Open Science is a general movement aiming at opening the “black boxes” of research and OPR is a part of that process. In general, OPR is practiced and promoted by new editorial initiatives that position themselves as pioneers in the general movement to open science: F1000Research, PeerJ, PubPeer, The Winnower, ScienceOpen. Older

¹²⁶ Moylan, Elizabeth C, et Maria K Kowalczyk. « Why articles are retracted: a retrospective cross-sectional study of retraction notices at BioMed Central ». *BMJ Open* 6, n° 11 (23 novembre 2016). doi:10.1136/bmjopen-2016-012047.

¹²⁷ Wang, P., Hoyt, J., Pöschl, U., Wolfram, D., Ingwersen, P., Smith, R. and Bates, M. (2016), The last frontier in open science: Will open peer review transform scientific and scholarly publishing?. *Proc. Assoc. Info. Sci. Tech.*, 53: 1–4. doi:10.1002/pra2.2016.14505301001

initiatives, that were forerunners for the development of open access, such as PLOS One and Pubmed (through Pubmed Commons) offer OPR as an option to researchers¹²⁸.

Finally, most of the discussions about OPR revolves around the advantages and drawbacks of losing anonymity in the process¹²⁹: on one side, anonymity protects authors against prejudiced judgments from reviewers on their work and reviewers from pressures that could come from their direct or indirect links with the authors. On the other side, despite formal procedures of anonymization, in many domains, anonymity cannot be guaranteed in practice because of the specialization constituting very small communities where it's easy to identify an author based on the subject of the paper and the other authors cited. This is particularly true in humanities and social sciences. All in all, OPR opens the debate whether research integrity should be guaranteed through approaches based on how reviewing practices should be in theory or are in reality.

In 2015, OpenAire supported 3 experiments aiming at implementing OPR in different contexts:

- Open Scholar CIC developed a module to be implemented on Dspace repositories. The Open Peer Review Module (OPRM) allowed for implementing invitation management to reviewers, management of reviews, commenting functionalities and a reputation engine. The aim of the reputation engine is to build quantitative indicators based on the quantity and quality of the reviews as well as on the reputation of the reviewers. So far, the OPRM has been implemented on CSIC repository and another one in Spain.
- The Winnower is a post-publication open peer review platform allowing authors to submit their paper and request reviews from the scientific community. During the OpenAire experiment, The Winnower developed a module to connect with OpenAire repository and fetch metadata, facilitating reviewing.

¹²⁸ Andy Tattersall, (2015) "For what it's worth – the open peer review landscape", Online Information Review, Vol. 39 Issue: 5, pp.649-663, doi: 10.1108/OIR-06-2015-0182

¹²⁹ Benos, D.J., Bashari, E., Chaves, J.M., Gaggar, A., Kapoor, N., LaFrance, M., Mans, R., Mayhew, D., McGowan, S., Polter, A., Qadri, Y., Sarfare, S., Schultz, K., Splittgerber, R., Stephenson, J., Tower, C., Walton, R.G., Zotov, A., 2007. The ups and downs of peer review. *Adv. Physiol. Educ.* 31, 145–152. doi:10.1152/advan.00104.2006.

- OpenEdition experiment is the only one deliberately targeting humanities and social sciences. OpenEdition achieved an OPR and Open Commentary experiment with Vertigo, a Canadian journal in environmental sciences. The experiment involved Vertigo blog on Hypotheses.org platform as a publishing venue for paper drafts and reviews, with the adjunction of hypothes.is plugin for detailed annotation. OpenEdition approach to OPR was to invest on human mediation rather than on the development of tools, considering OPR needs specific curation regarding the management of reviewers and authors relations during the whole process¹³⁰.

In general, very few examples of OPR exist in humanities and social sciences. It must be noted that one of the early adopters was a reference journal in anthropology – *Current anthropology* – which chose to publish papers reviews (named “Responses” and inserted at the end of the articles text) from 1959, long before the whole idea became so discussed about. Innovative platforms such as Ubiquity Press must be acknowledged as opening the way for OPR in those disciplines. HIRMEOS¹³¹, a H2020 project implementing added value services on top of 5 important open access academic books publishing platforms will use hypothes.is plugin to allow for open annotation on the full text of the books. It is planned that an experiment will be achieved in the course of the project for post-publication OPR using this feature; that would be a premiere for academic books.

As far as humanities and social sciences academic communities are concerned, OPR is an important topic to watch. Collective discussions are regularly organized on the question of quality control for journals and books in those disciplines and OPR should definitely be a part of it. The discussion should be based on lessons learned from experiments such as those achieved by OpenEdition and HIRMEOS and on literature reviews such as the one that OpenAire produced during its OpenAire2020 project. Finally, the discussion should involve researchers through scholarly societies,

¹³⁰ Julien Bordier. Évaluation ouverte par les pairs : de l'expérimentation à la modélisation : Récit d'une expérience d'évaluation ouverte par les pairs. ” <https://hal.archives-ouvertes.fr/hal-01283582>

¹³¹ <http://hirmeos.eu>

publishers through their national associations – and European with AEUP -, and research funding organizations. OPERAS consortium, as a collective endeavor to develop an infrastructure for open scholarly communication at European level could be the right player to organize such a discussion involving the concerned stakeholders, in partnership with its sister infrastructures OpenAire and Darjah.

5. Conclusions - Policy Implications

In the SSH, uncoordinated activities and lack of common standards complicate the transition to Open Science and OA publishing as standard practice

Issues to be addressed: Common standards
best practices
business models
research and development
future services
multilingualism

OPERAS as a model of distributed infrastructure for scholarly communication

- OPERAS addresses effectively existing interoperability and interconnectivity issues in the OA publishing landscape.
- Moreover, it fosters the future development of complementarities and enables all concerned parts to extend the outreach of high quality research and scholarship.
- OPERAS designs governance models and implements solutions that will enhance stakeholders' capacity to correspond to all needs emerging from the transition of science to the digital paradigm.
- OPERAS' extensive membership of key institutions (research centres, universities, service providers) from several MS sets the foundations for the essential shift at national level and ensures the operational capacity and sustainability at EU level.

OPERAS-D (Design) project aims at supporting the core group members of OPERAS network in the development of an e-infrastructure for open access publications in the SSH. As a first step towards this aim, the project conducted a landscape study to identify key stakeholders involved in open access publishing, to explore existing and emerging practices, initiatives and challenges. The analysis will allow the project to identify the issues that need to be addressed by the OPERAS network in moving forward and in further supporting open access publishing especially in the SSH by addressing the challenges involved in renewing the scholarly communication practices in the digital age and in the context of Open Science. This initiative acquires further importance in

the case of SSH, as they lag behind in terms of exploiting the full potential of the open web.

The study has confirmed the existence of multiple actors and practices in the open access publishing ecosystem. This publishing landscape is by no means static but rather continuously evolving as a result of the increasing uptake of open access publishing (powered also by funder and institutional policies and mandates) and the progress observed on the infrastructure level. In terms of actors, the open access publishing system is characterized by their large number and their diversity, as they include from university presses to smaller scholarly initiatives offering varying levels of services and relying on different sources of funding.

Despite the existence of important and pioneering initiatives, further effort is required in order to support a truly innovative vision for scholarly publishing in the digital age. In the SSH, uncoordinated activities and lack of common standards complicate the transition to Open Science and OA publishing as standard practice. Moreover, fragmentation of institutional publishing initiatives and limited dissemination of publications entails particular difficulties for infrastructure providers -such as institutional libraries and publishing platforms- in elaborating collectively adopted models and publishing practices. Important issues to consider are the necessity of proposed initiatives to be participatory and federated and the need to establish a common framework focusing on the introduction of common standards. Issues of governance and interconnectivity will also be important.

This report reflects the perceived need for coordinated initiatives (by MS and at EU level) aiming at the defragmentation of the open access publishing market in the SSH. In light of the recent developments within the open access policy framework, the ongoing discussion on the potential of integrated infrastructures as well as the diversity of actors involved in scholarly communication, more thought needs to be given to how existing publishing initiatives will be incorporated into an overarching infrastructure that will reduce exiting inconsistencies.

To move academic research more thoroughly into the public domain is to create a substantial alternative source of public information that would support innovative

communication methods and realise the goal of increased collaboration across existing infrastructures.

In this context, the more recent proposal regarding the creation of an innovative public information infrastructure (the European Open Access Platform)¹³² seems to have attracted attention. Combined, the European Open Science Cloud and the European Open Access Platform may serve as a robust starting point for the development of EU-wide infrastructures dedicated to effectively disseminating peer-reviewed scientific output. Notwithstanding the outreach and impact of such initiatives, existing infrastructures and services may not fulfill researchers' needs. As large-scale e-infrastructure play an increasingly important role in supporting innovative research activities and enabling scholarly communication, a number of significant challenges have yet to be met in the open access scholarly publishing landscape. Special focus should be given to the establishment of a common policy framework and the formulation of action plans at EU level to strengthen scientific publishing towards a sustainable approach along the following lines:

- Common standards: a common set of practices and principles applied and evaluated by e-infrastructure providers at all stages of the publishing process
- Best practices: introduction of innovative and sustainable operational models that produce best results and maintain high quality content and minimum technical standards
- Business models: conceptual, administrative and financial arrangements corresponding to current challenges and OA publishing needs
- Research and Development: services to identify and implement corporate publishing and communication models or enhance the interoperability and complementarity of existing infrastructures
- Future services: a roadmap to achieve these goals according to the requirements for long term sustainability

¹³² Fecher, B., Friesike, S., Peters, I., Wagenr, G. (2017) Rather than simply moving from “paying to read” to “paying to publish”, it’s time for a European Open Access Platform, LSE Impact Blog, 10 April 2017, <http://blogs.lse.ac.uk/impactofsocialsciences/2017/04/10/rather-than-simply-moving-from-paying-to-read-to-paying-to-publish-its-time-for-a-european-open-access-platform/> and also for a response: Ross-Hellauer, T. (2017) OpenAIRE as the basis for a European Open Access Platform, OpenAIRE Blog, 5 May 2017, <https://blogs.openaire.eu/?p=1961>

Future initiatives should aim precisely at creating a centrally governed European infrastructure for the coordination of the OA publishing ecosystem and establish new synergies that could further the implementation of Open Science and introduce more effective ways of scholarly communication. Especially designed to cover the needs of the SSH research community, OPERAS addresses effectively existing interoperability and interconnectivity issues in the OA publishing landscape. Moreover, it fosters the future development of complementarities and enables all concerned parts to extend the outreach of high quality research and scholarship.

OPERAS designs governance models and implements solutions that will enhance stakeholders' capacity to meet global challenges and correspond to all needs emerging from the transition of science to the digital paradigm. Furthermore, its extensive membership of key institutions (research centres, universities, service providers) from several MS sets the foundations for the essential shift at national level and ensures the operational capacity and sustainability of an EU-wide incorporated infrastructure.

Annex I

OPERAS Network Members

Core Group

Institute of Literary Research of the Polish Academy of Sciences – IBL PAN (PL)

<http://ibl.waw.pl/>

Max Weber Foundation – MWS (DE) <http://www.maxweberstiftung.de/startseite.html>

National Documentation Centre – EKT (GR) <http://www.ekt.gr/en/>

Open Access Publishing in European Networks – OAPEN (NL) <http://www.oapen.org>

OpenEdition (FR) <http://cleo.openedition.org/>

UCL Press (UK) <https://www.ucl.ac.uk/ucl-press>

UC Digitalis/Coimbra University Press (P) <https://digitalis.uc.pt/en>

University of Zadar (HR) <http://iz.unizd.hr/>

Members

Association of European University Presses – AUEP (EU) <http://www.aeup.eu/>

Conference of Italian University Rectors – CRUI (IT) <https://www.cruai.it/>

Georg-August-University Göttingen – UGOE (DE) <http://www.uni-goettingen.de/en/1.html>

Huma-Num (FR) <http://www.huma-num.fr/about-us>

Italian National Research Council – CNR (IT) <http://www.iliesi.cnr.it/EN/>

Knowledge Unlatched (UK) <http://www.knowledgeunlatched.org/>

Napoli University Federico II (IT) http://www.unina.it/en_GB/home

Open Books Publishers (UK) <http://www.openbookpublishers.com/>

Open Library of Humanities – OLH (UK) <https://www.openlibhums.org/>

Ubiquity Press (UK) <http://www.ubiquitypress.com/>

University Institute of Lisbon – ISCTE-IUL (PT) <https://www.iscte-iul.pt/>

University of Turin (IT) <https://www.unito.it/>

Università Ca' Foscari Venice (IT) <http://www.unive.it/>

Virtual Centre for Knowledge about Europe – CVCE (LX) <http://www.cvce.eu/en/home>

References

- Archambault, E., Amyot, D., Deschamps, P., Nicol, A., Provencher, F., Rebut, L. and Roberge, G. (2014). "Proportion of Open Access Papers Published in Peer-Reviewed Journals at the European and World Levels- 1996-2013". Science-Metrix, http://science-metrix.com/sites/default/files/science-metrix/publications/d_1.8_sm_ec_dg-rtd_proportion_oa_1996-2013_v11p.pdf (retrieved 6 April 2017).
- Arts and Humanities Research Council. "Open Access" <http://www.ahrc.ac.uk/about/policies/openaccess/> (accessed 7 April 2017).
- Athabasca University Press. "About Open Access to Scholarly Information" <http://www.aupress.ca/index.php/about/openaccess> (accessed 3 May 2017).
- Australian National Data Service. "Data and Service" <http://www.ands.org.au/working-with-data/publishing-and-reusing-data/data-journals> (retrieved 4 May 2017).
- Australian National University. "About ANU Press". <https://press.anu.edu.au/about/about-anu-press> (accessed 2 May 2017).
- Australian Research Council (2015). "Open Access Policy, version 2015.1" http://www.arc.gov.au/sites/default/files/filedepot/Public/Policy%20&%20Strategy/ARC%20Open%20Access%20Policy/ARC_Open_Access_Policy_V2015.1_17Aug15.pdf (retrieved 9 May 2017).
- Bargheer, M., Schmidt B. (2008). "Gottingen University Press: Publishing services in an open access environment", *Information Services and Use*, 28(2): 133-139. doi: 10.3233/ISU-2008-0569.
- Benos, D.J., Bashari, E., Chaves, J.M., Gaggar, A., Kapoor, N., LaFrance, M., Mans, R., Mayhew, D., McGowan, S., Polter, A., Qadri, Y., Sarfare, S., Schultz, K., Splittgerber, R., Stephenson, J., Tower, C., Walton, R.G., Zotov, A., (2007). "The ups and downs of peer review". *Advances in Physiology Education*. 31, 145–152. doi:10.1152/advan.00104.2006.
- Bethesda Statement on Open Access Publishing, 20 June 2003, <http://legacy.earlham.edu/~peters/fos/bethesda.htm> (accessed 23 March 2017).
- Bordier, J, (2016). "Évaluation ouverte par les pairs : de l'expérimentation à la modélisation : Récit d'une expérience d'évaluation ouverte par les pairs". *Archives ouvertes*, <https://hal.archives-ouvertes.fr/hal-01283582> (retrieved 17 April 2017).
- Budapest Open Access Initiative, "Read the Budapest Open Access Initiative", 14 February 2002, <http://www.budapestopenaccessinitiative.org/read> (accessed 22 March 2017).
- Budapest Open Access Initiative. "Ten Years on from the Budapest Open Access Initiative-setting the default to open", 12 September 2012, <http://www.budapestopenaccessinitiative.org/boai-10-recommendations> (accessed 22 March 2017).
- Council of the European Union (2016). "The transition towards an Open Science System: Council conclusions" <http://data.consilium.europa.eu/doc/document/ST-9526-2016-INIT/en/pdf> (retrieved 23 March 2017).

Crossick, G. (2015). "Monographs and Open Access. A report to HEFCE". <http://www.hefce.ac.uk/pubs/rereports/year/2015/monographs/> (retrieved 13 Feb 2017).

Dallmeier-Tiessen, S., Darby, R., Goerner, B., Hyppoelae, J., Igo-Kemenes, P., Jahn, D., Lambert, S., Lengerfelder, A., Leonard, C., Mele, S., Nowicka, M., Polydoratou, P., Ross, D., Ruiz-Perez, S., Schimmer, R., Swaisland, M., and van der Stelt, W. (2011). "Highlights from the SOAP project survey. What scientists think about open access publishing", arXiv: 1101.5260.

De Castro, P. (2015). "Assessing readiness for open access policy implementation across Europe", <http://pasteur4oa.eu/sites/pasteur4oa/files/resource/PASTEUR4OA%20EuroCRIS%20Case%20Study.pdf> (retrieved 24 March 2017).

De Castro, P. (2016) "Funded Bids for the Alternative Funding Mechanism for APC-free Open Access Journals and Platforms", OpenAIRE blog, 1 August 2016, <https://blogs.openaire.eu/?p=1139> (accessed 24 March 2017).

Dergi Park. "About Dergi Park" <http://dergipark.gov.tr/page/about> (accessed 2 February 2017).

DOAB (Directory of Open Access Books). <http://www.doabooks.org/> (accessed 16 February 2017).

Directory of Open Access Journals (DOAJ) <https://doaj.org/> (accessed 9 February 2017).

Economic and Social Research Council. "Open Access to Research Outputs" <http://www.esrc.ac.uk/funding/guidance-for-grant-holders/open-access-to-research-outputs/> (accessed 24 February 2017).

EKT ePublishing. <http://epublishing.ekt.gr/en> (accessed 10 May 2017).

ERIH PLUS (The European Reference Index for the Humanities and the Social Sciences). <https://dbh.nsd.uib.no/publiseringsskanaler/erihplus/about/index> (accessed 28 April 2017).

European Commission (2012). "Towards better access to scientific information: Boosting the benefits of public investments in research", http://ec.europa.eu/research/science-society/document_library/pdf_06/era-communication-towards-better-access-to-scientific-information_en.pdf (accessed 24 March 2017).

European Commission (2012). "Commission Recommendation of 17.07.2012 on access to and preservation of scientific information", C(2012)4890 final. http://ec.europa.eu/research/science-society/document_library/pdf_06/recommendation-access-and-preservation-scientific-information_en.pdf (accessed 24 March 2017).

European Commission (2016). "H2020 Programme Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020", version 3.1, 25 August 2016.

European Commission (2016). "Open Innovation, Open Science, Open to the world- a vision for Europe", <https://ec.europa.eu/research/openinnovation/index.cfm> (accessed 23 March 2017).

European Commission (2017). "H2020 Programme. Guidelines on Open Access to Scientific Publications and Research Data in Horizon2020", version 3.2, 21 March 2017.

http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf (accessed 24 March 2017).

European Research Council (2016). "Open Access Guidelines for research results funded by the ERC, revised February 2016"

https://erc.europa.eu/sites/default/files/document/file/ERC_Open_Access_Guidelines-revised_feb_2016.pdf (retrieved 11 March 2017).

Eve, M. P. (2014). *Open Access and the Humanities: Contexts, Controversies and the Future*, Cambridge, Cambridge University Press. <https://doi.org/10.1017/CBO9781316161012>

Eve, M.P. (2017). "The starting pistol has been fired- now it the time to heed the drive towards open access books", LSE Impact Blog, 7 March 2017, <http://blogs.lse.ac.uk/impactofsocialsciences/2017/03/07/the-starting-pistol-has-been-fired-now-is-the-time-to-heed-the-drive-towards-open-access-books/?platform=hootsuite> (accessed 8 March 2017).

Fecher, B., Friesike, S., Peters, I., Wagenr, G. (2017) "Rather than simply moving from 'paying to read' to 'paying to publish', it's time for a European Open Access Platform", LSE Impact Blog ,10 April 2017, <http://blogs.lse.ac.uk/impactofsocialsciences/2017/04/10/rather-than-simply-moving-from-paying-to-read-to-paying-to-publish-its-time-for-a-european-open-access-platform/> (accessed 11 April 2017).

Ferwenda, E. Snijder, R., Adema, J. (2013). "OAPEN-NL. A project exploring Open Access monograph publishing in the Netherlands, Final Report" <https://www.oapen.org/content/reports#OAPEN-NL> (accessed 12 May 2017).

Ferwerda, E. (2014). "Open access monograph business models", *Insights*, 27(s), 35-38, <http://dx.doi.org/10.1629/2048-7754.46>

Frank, Gwen. OpenAIRE FP7 Post-Grant Open Access Pilot: extension, OpenAIRE blog, 2 May 2017 <https://blogs.openaire.eu/?p=1880> (accessed 3 May 2017).

Frosio, F. (2014). "Open Access Publishing: A Literature Review, CREATE Working Paper 2014/1" <http://www.create.ac.uk/wp-content/uploads/2014/01/CREATE-Working-Paper-2014-01.pdf> (retrieved 4 May 2017).

Gatti, R. ""Introducing Some Data to the Open Access Debate: OBP's Business Model", Open Book Publishers Blog, 15 October 2015. <http://blogs.openbookpublishers.com/tag/ruPERT-gatti/>

Gatti, R. and Mierowsky, M. (2016). "Funding Open Access Monographs, A coalition of libraries and publishers", *College and Research Libraries*, 77(9): 456-459 <http://crln.acrl.org/index.php/crlnews/article/view/9557/10902> (accessed 4 May 2017).

Göttingen University. "What is Open Access?" <https://www.sub.uni-goettingen.de/en/electronic-publishing/open-access/> (accessed 23 March 2017).

Guedon, J.C. "Open Access: Towards the Internet of the Mind", 23 February 2017 <http://www.budapestopenaccessinitiative.org/open-access-toward-the-internet-of-the-mind> (accessed 11 March 2017).

Higher Education Funding Council for England (2016). "Policy for Open Access in Research Excellence Framework 2021. Updates in November 2016. Guidance Note 2016/ 35" http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/2016/201635/HEFCE2016_35.pdf (retrieved 11 April 2017).

Higher Education Funding Council for England (2016). "Consultation to the second Research Excellence Framework, December 2016/36" http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/2016/201636/HEFCE2016_36.pdf (retrieved 11 April 2017).

HIRMEOS project. <http://hirmeos.eu> (accessed 23 May 2017).

Hrcak- Portal of Scientific Journals of Croatia, <http://hrcak.srce.hr/> (accessed 6 April 2017).

Jahn N. and Tullney, M. (2016) "A study of institutional spending on open access publication fees in Germany", *PeerJ* 4: e2323 <https://doi.org/10.7717/peerj.2323>

JISC (2016). "Investigating OA monograph services: Final Report", <https://www.jisc-collections.ac.uk/Global/Investigating%20OA%20Monograph%20Services/Jisc-OAPEN%20pilot%20Final%20report.pdf> (retrieved 5 May 2017).

Jonhson, R., Fosci, M., Chiarelli, A., Pinfield, S., Jubb, M. (2017). "Towards a competitive and sustainable OA market in Europe- A study of the Open Access Market and Policy Environment, A study prepared for the OpenAIRE2020 project on behalf of the European Commission", Research Consulting, <https://blogs.openaire.eu/wp-content/uploads/2017/03/OA-market-report-28Final-13-March-201729-1.pdf> (retrieved 15 May 2017).

Journal of Open Archaeology Data. <http://openarchaeologydata.metajnl.com/> (accessed 10 April 2017).

Journal of Open Psychology Data. <http://openpsychologydata.metajnl.com/> (accessed 10 April 2017).

Knowledge Unlatched <http://www.knowledgeunlatched.org/> (accessed 5 May 2017).

Laakso, M. Welling, P., Bukvova, H., Nyman, L., Bjork, B.C., Hedlund, T. (2011) "The Development of Open Access Journals Publishing from 1993 to 2009", *PLoS ONE*, 6(6) e20961. doi: 10.1371/journal.pone.0020961

London Economics (2015). "Economic analysis of business models for open access monographs". Annex 4 to the Report off the HEFCE Monographs and Open Access Project <https://london-economics.co.uk/blog/publication/economic-analysis-business-models-open-access-monographs/> (accessed 20 February 2017).

Maron, N., Mulhern, C., Rossman, D., Schmelzinger, K. (2016) "The Costs of Publishing Monographs. Towards a Transparent Methodology", *ITHAKA S+R*, <https://doi.org/10.18665/sr.276785> (accessed 20 February 2017).

Max Planck Society. "Berlin Declaration on Open Access to Knowledge in the Sciences and the Humanities", 22 October 2003, https://openaccess.mpg.de/67605/berlin_declaration_engl.pdf (accessed 23 March 2017).

- Milloy, C., Collins, E. (2016). "OAPEN-UK Final Report. A five-year study into open access monograph publishing in the humanities and social sciences", Jisc. <http://oapen-uk.jiscebooks.org/files/2016/01/OAPEN-UK-final-report.pdf> (retrieved 21 February 2017).
- Monash University Publishing. "About Monash University Publishing". <http://www.publishing.monash.edu/about.html> (retrieved 21 February 2017).
- Moore, S. (2016). "Open Access Monographs". PASTEUR4OA Briefing Paper. doi: 10.5281/zenodo.51853
- Morisson, H. (2017). "Directory of Open Access Journals (DOAJ)", *The Charleston Advisor*, doi:10.5260/chara.18.3.25.
- Moylan, E. C, Kowalczyk M.K.(2016). "Why articles are retracted: a retrospective cross-sectional study of retraction notices at BioMed Central", *BMJ Open* 6, n° 11. doi:10.1136/bmjopen-2016-012047
- National Institutes of Health. "Public Access Policy" <https://publicaccess.nih.gov/FAQ.htm#4003> (accessed 13 April 2017).
- National Library of Sweden (2016). "Open APC Sweden. A national open repository of publication costs for open access articles". Stockholm. http://www.kb.se/dokument/open%20access/Open_APC_Sweden_English_LAST.pdf (accessed 13 April 2017).
- Netherlands' EU Presidency (2016). *Amsterdam Call for Action on Open Science* <https://english.eu2016.nl/documents/reports/2016/04/04/amsterdam-call-for-action-on-open-science> (accessed 14 April 2017)
- OAPEN (Open Access Publishing in European Networks). <http://www.oapen.org/home> (accessed 5 May 2017)
- OpenAIRE. "Openaire's Experiments in Open Peer Review / Report". Zenodo, September 22, 2016. doi:10.5281/zenodo.154647.
- OpenAIRE. "FP7 post-grant Open Access publishing funds pilot" <https://www.openaire.eu/postgrantoapilot> (accessed 18 May 2017).
- OpenEdition. <http://www.openedition.org/> (accessed 8 May 2017).
- OpenEdition. "OpenEdition Freemium for Books" <http://www.openedition.org/13052> (accessed 8 May 2017).
- OPERAS (Open Access in the European Research Area through scholarly communication). <http://operas-eu.org> (accessed 23 May 2017).
- OPERAS-D (Design for Open Access Publications in European Research Area for Social Sciences and Humanities) <http://operas.hypotheses.org/operas-d> (accessed 23 May 2017).
- Packer, A.L., Cop, N., Luccisano, A., Ramalho, A., Spinak, E. (2014). *SciELO: 15 Years of Open Access. An analytical study of Open Access and Scholarly Communication*, Paris: UNESCO, 186 p. ISBN 978-92-3001-237-3. doi: 10.7476/9789230012373.
- PASTEUR4OA (Open Access Policy Alignment Strategies for European Union Research), <http://pasteur4oa.eu/> (accessed 6 February 2017).

Pinfield, S. and Middleton, C. (2012), "Open access central funds in UK universities", *Learned Publishing*, 25: 107–114, doi: 10.1087/20120205.

Public Knowledge Project. "Open Journal Systems" <https://pkp.sfu.ca/ojs/> (accessed 9 February 2017).

Redalyc. <http://www.redalyc.org/home.oa> (accessed 4 April May 2017).

RePEc (Research Papers in Economics). <http://repec.org/> (accessed 6 April 2017).

Research Councils UK (2013). "RCUK Policy on Open Access and Supporting Guidance". <http://www.rcuk.ac.uk/documents/documents/rcukopenaccesspolicy-pdf/> (retrieved 29 March 2017).

ROARMAP (Registry of Open Access Repository Mandates and Policies) <http://roarmap.eprints.org/> (accessed 29 March 2017).

Ross-Hellauer, T. "After SSRN: Hallmarks of trust for subject repositories", 24 May 2016, <https://blogs.openaire.eu/?p=933> (accessed 23 May 2017).

Ross-Hellauer, T. (2017). "Defining Open Peer Review: Part One – Competing Definitions", OpenAIRE blog, 30 October 2016, <https://blogs.openaire.eu/?p=1371> (accessed 3 May 2017).

Ross-Hellauer, T. "OpenAIRE as the basis for a European Open Access Platform", OpenAIRE Blog, 5 May 2017, <https://blogs.openaire.eu/?p=1961> (accessed 5 May 2017).

SCOAP3 (Sponsoring Consortium for Open Access Publishing in Particle Physics). <https://scoap3.org/> (accessed 23 May 2017).

Sherpa – Romeo, <http://www.sherpa.ac.uk/> (accessed April 2017).

Solomon, D. and Bjork, B.C. (2011). "A study of open access journals using article processing charges", *Journal of the American Society for Information Science and Technology*, 63(8): 10.1002/asi.22673

SSRN (Social Science Research Network). <https://www.ssrn.com/en/> (accessed 17 March 2017).

Suber, P. (2005). "Promoting Open Access in the Humanities", *Syllecta Classica*, Volume 16, pp. 231-246. doi: 10.1353/syl.2005.0001

Swan, A. (2012). "Policy Guidelines for the Development and Promotion of Open Access". UNESCO. <http://unesdoc.unesco.org/images/0021/002158/215863e.pdf> (accessed 24 March 2017).

Swan, A. (2015). "PASTEUR4OA Case Study: Institutional policy implementation at the University of Liege". http://www.openaccess.gr/sites/openaccess.gr/files/Case%20study%20U%20Liege_FINAL.pdf (accessed 24 March 2017).

Swan, A., Gargouri, Y., Hunt, M., and Harnad, S. (2015). "Report on policy recording exercise, including policy typology, and effectiveness and list of further policy maker targets", Deliverable D3.1, PASTEUR4OA Project, March 2015, <http://pasteur4oa.eu/deliverables?page=1> (accessed 23 March 2017).

Tattersall, A. (2015). "For what it's worth – the open peer review landscape", *Online Information Review*, Vol. 39 Issue: 5, pp.649-663, doi: 10.1108/OIR-06-2015-0182.

Tsoukala, V. (2015). "University-based open access publishing: state of play". Report to SPARC Europe.

http://sparceurope.org/wp-content/uploads/2015/12/SE_UPublishing_Report_0315.pdf

(retrieved 23 May 2017).

The Wellcome Trust. "Complying with our open access policy"

<https://wellcome.ac.uk/funding/managing-grant/complying-our-open-access-policy>

(accessed 12 May 2017).

Universita degli Studi di Torino (2014). "Regolamento di Ateneo sull' accesso aperto-modifiche", https://www.unito.it/sites/default/files/reg_openaccess_2014.pdf (accessed 14 February 2017).

University of California Press. Luminos. <http://www.luminosoa.org/> (accessed 5 May 2017).

Walters C., Hilton, J., et al. (2015) "A study of direct author subvention for publishing Humanities books at two Universities: A report to the Andrew W. Mellon Foundation by Indiana University and University of Michigan. <http://hdl.handle.net/2027.42/113671>

Wang, P., Hoyt, J., Pöschl, U., Wolfram, D., Ingwersen, P., Smith, R. and Bates, M. (2016), "The last frontier in open science: Will open peer review transform scientific and scholarly publishing?", *Proc. Assoc. Info. Sci. Tech.*, 53: 1–4. doi:10.1002/pr2.2016.14505301001

Zenodo. <http://about.zenodo.org/> (accessed 13 February 2017).