Westminster Papers in Communication and Culture

Dulong de Rosnay, M. (2021). Open Access Models, Pirate Libraries and Advocacy Repertoires: Policy Options to Construct and Govern Academic Knowledge Commons. *Westminster Papers in Communication and Culture,* 16(1), 46–64. DOI: https://doi.org/10.16997/wpcc.913

RESEARCH ARTICLE

Open Access Models, Pirate Libraries and Advocacy Repertoires: Policy Options to Construct and Govern Academic Knowledge Commons

Melanie Dulong de Rosnay

Center for Internet and Society, CNRS (National Center for Scientific Research), FR

melanie.dulong@cnrs.fr

In this article, I propose exploring open access academic publishing through the lenses of Knowledge Commons. Instead of focusing on users' rights to access and reuse the output under open copyright licensing conditions, I study the governance of the academic publishing ecosystem, and its political economy, technical and labour infrastructure. Based on selected examples, I discuss how they comply with the concept of the commons.

I use analytical frameworks from the Ostromian literature of the governance of Knowledge Commons to provide insights on the various steps of academic publishing work as a process. I then analyse a range of open access publishing projects, including gold, green, diamond, platinum and pirate libraries. Finally, I draw from practices a repertoire of advocacy actions and I make recommendations for academics to develop policies supporting Academic Commons.

Keywords: open access; academic publishing; knowledge commons; information commons; academic commons; copyright; pirate libraries

Introduction

A large portion of academic journals can be accessed only through paywalls. University libraries' subscriptions come in expensive bundles, which are arduous to negotiate.

Standard practice for many journals requires authors to transfer all of their rights under copyright by contract to the publisher, sometimes without retaining the right of uploading the final published version of their work on their university homepage, despite some exceptions on self-archiving policies. Academic commercial publishing is one of the most profitable industries with double figure profit margins and sometimes even 30% plus margins (Larivière, Haustein and Mongeon 2018) due to subscription fees and article reading charges (Darnton, 2014). However, the substantive added value of commercial publishers can be considered as low (see Larivière, Haustein and Mongeon 2015), and since academics undertake the authorial, and most of the editorial (Anderson, 2018, lists the tasks performed) and reviewing labour for no – or in rare cases – very little payment. (Key exceptions might

include association journals in areas like biomedicine and some professional legal journals). Yet, 'we buy back the results of our labour at outrageous prices' (Sample, 2012, citing then Harvard library director Robert Darnton).

Since the 1990s, experiments have been made to disrupt and reverse the model of exclusive rights assignment to publishers, and bring those rights closer to the authors in order to grant free and permanent access to the public. Various open access models have been explored by journals edited by academics themselves, librarians, scholarly associations, and both non-profit and commercial publishers.

In this article, I explore the scope of open access publishing output and process under the theoretical lenses of the governance of the knowledge commons. (On open access as a commons, see previous work by Suber in Hess and Ostrom, 2007 and Suber, 2016, Moore 2018a and 2018b on the work of care, and Lawson 2019 on its departure from neoliberal ideology). The exploration is conducted with a focus on rights coming under copyright, as well as the underlying ecosystem, publishing's technical infrastructure and political economy. In the first section, I bring together the analytical framework from the literature of the commons and the various dimensions and steps of academic publishing work these principles can be applied to. In a second section, based on illustrative cases, I explain how the framework of the commons can be applied to various types of open access and openly accessible resources, and how they match up or diverge from commons ideals and models.

In a third section, I draw from examples of resistance and advocacy practices a repertoire of individual and collective actions that could benefit readers, authors, and journals as elements of a publishing ecosystem partly governed as a commons.

1. Methodology

The paper applies selected dimensions of the commons (presented in section 1) to the legal, technical and political economy understandings and affordances of a variety of open access models (section 2), and finally to draw possible policy actions conducive to constructing an Academic Commons (section 3). In this article, I consider only the final resource produced and published (paper, chapter, book or datasets). Another understanding of academic knowledge commons could be the development of a research community, a collective involving researchers' and citizens' contributions to a scientific project to produce knowledge around a certain topic or area in to a repository (eg 'a "knowledge commons" in healthcare: an open system of knowledge with researchers, practicing clinicians, patients, their families and communities all involved in capturing, refining and utilising a common body of knowledge in real time', Loder, Bunt and Wyatt 2013), but this is not the type of academic commons studied in this article.

Two analytical frameworks can be used to analyse open access publication as knowledge commons: first, focusing just on the access to the resource, a breaking down of the different rights under copyright which authors and readers may enjoy in scholarly works as a resource (1.1), and secondly, a deeper dive into the governance of the editorial work and broader surroundings and settings of academic publishing considered as an ecosystem and a community (1.2).

1.1 Legal levels of open access to academic resources

This section presents a static analysis of the legal conditions of access to academic publishing resources as open access resources. This dimension is not sufficient to characterise them as commons, however, this understanding in terms of affordances as an end-user has been at the foundation of both Creative Commons and the open access movement advocating for legal access to academic resources.

A first way to understand legal affordances of open access resources is through the options of Creative Commons licenses whereas a second commons-based frame to analyse legal open

access is based on Elinor Ostrom's notion of a bundle of rights (Ostrom, 1990; Orsi, 2013) which also allows us to reflect on Creative Commons licensing options.

The minimalistic version of open access, after closed access, is mere free access online, without any copyright implications. According to copyright which applies by default, no rights besides the right to read are provided. Intermediate levels of open access provide information on the legal status of the resource with some rights reserved according to a Creative Commons license. They can include or reserve the rights to make derivatives, or to make commercial use (CC BY-NC-ND, CC BY-ND, CC BY-NC). At the same intermediate level, the Share Alike license (CC BY-SA) forces the reuser to license the derivative under the same conditions. The latter copyleft model, developed for software and other utilitarian works, is not particularly well adapted to perform traditional acts in academic publishing, for papers in which ideas are reused and cited, which does not involve copyright, as opposed to just being copy/pasted. A case where this license would be legally useful might be the reuse of a portion of one's own work in a subsequent paper: not the same as the case of self-plagiarism, it should become acceptable to reuse one's own paragraphs, for instance in literature review sections (on plagiarism, see Biagioli, 2012).

The second last highest degree of open access is the provision of academic resources under Creative Commons Attribution only licenses (CC BY), where the only condition is to cite the name of the author. This version actually corresponds to general scientific usages, and there is not a burden to reproduce or to cite articles manually. However, use of CC BY can add complexity and create unnecessary contractual liability issues in the case of data mining of multiple databases (Dulong de Rosnay, 2010).

The highest degree of open access is the release of the work under a CC0 public domain waiver, which places the resource in the public domain with no conditions on further reproduction or reuse. Even if it has been advertised as frictionless for data mining, some governments such as UK and France preferred to write their own licenses for open data to maintain data integrity standards, adding a condition to not modify the data and to cite the date and source of production (Dulong de Rosnay and Janssen, 2014).

A second way of understanding how rights can be shared is to update the bundle of rights of traditional commons to licensing under copyright. Access, withdrawal, management, exclusion and alienation – the traditional actions – (Ostrom, 1990), can be translated into the right to access or read; to reuse; the right to make commercial use of, for instance incorporate into a syllabus for business training; the right of translation, for instance by another publisher; and finally, the right to reuse the underlying dataset, perhaps under the condition to attribute.

The right of ownership traditionally structures access to and enjoyment of property, which translates into the right to *exclude* and the right to *alienate*. Roman law provides for a separation of this right into three categories: *usus* or the right to use the property; *fructus*, the right to make the property bear fruit or to rent it; and *abusus* or the right to dispose of the property, to resell it. These rights may be concentrated (*usufruct* combines *usus* and *abusus*), but different mechanisms allow for the sharing of ownership of both physical and natural goods, as well as information and digital goods, with a view to transforming them into common goods and ensuring their durability. These Roman property law categories can be applied to copyright (Emmett, 2015).

Commons resources are things (*res communis*) which cannot be appropriated and can be used by everyone; they constitute an alternative both to exclusive individual private property and to unregulated free access, corresponding to the situation of things without master or *res nullius*, negatively thought of as the state of things that are inappropriate, when they are not yet an object of rights.

The non-rivalrous nature of immaterial, intangible resources such as knowledge and academic production makes them conducive to non-exclusive ownership. Copyright provides for a monopoly of exploitation both limited in time by the public domain and in acts by exceptions

to exclusive rights which provide that some uses may remain free for all (depending on the jurisdiction: parody, quotation for the purposes of criticism, research or teaching, etc.).

The bundle of rights so defined provides a body of law, a positive space for thinking about common or shared property (Orsi, 2013). It distinguishes between the right of access to the common resource, the right to harvest (e.g. wood in a forest), the right of management (e.g. regulation of the right to harvest), the right to exclude (deciding who will have the right of access), the right to alienate (selling or transferring other rights). Orsi, quoting De Moore, recalls that before the phenomenon of land enclosure, natural resources were considered common property, with a bundle of rights (access, exploitation, management, governance, exclusion, alienation) distributed according to the different uses: 'rights of the farmer (from ploughing to harvesting) and (...) different rights of use of village communities such as the right to glean, the right to graze in vain, the right to forage'. She explains that the analysis of property as a bundle of rights had already been carried out at the beginning of the 20th century by critical American jurists of legal realism (Johnson, 2007). Property is thus seen not as a source of an absolute and monolithic natural right protected by state law, but as a set of social relations with different responsibilities, rights and duties.

As outlined earlier, Creative Commons licenses segment the exercise of copyright according to the distribution of roles in literary and artistic creation. Such licenses guarantee everyone the right of access (*usus* in Roman law). The rights of modification, reproduction or commercial exploitation (the transformation corresponding to *fructus*) will be implemented by certain more active contributors according to the permissions granted by the original creators. The latter will be able to avoid exclusion, enclosure or privatisation (*abusus*) by conferring a right to the commons, with the help of the copyleft clause of identical sharing of conditions. This regime requires that derivative works (*fructus*) be disseminated under the same conditions of access and use (*usus* and *abusus*) for all. Copyleft will thus distribute ownership by granting rights to the public as a collective, whose members may decide to implement these rights individually by making a derivative creation and licensing it.

This organisation of ownership is private and depends on the will of the content creators and this model reinforces a vision centred on the individual author's choice and privileges rather than on the distribution of rights within society (Elkin-Koren 2005, Barron, 2014). However, it can be used by academic platforms, the 'providers' according to Ostrom's terminology, since they can impose conditions on authors, contributors-publishers of journals and readers-users-consumers-future-authors, in the way they permit the exercise of the different bundles of rights. For instance, OpenEdition platform hosting journals and providing the technical infrastructure has a review process to examine candidates, and situates open access as a core value before deciding whether a journal will be accepted on the platform.

1.2 Analytical structures to govern open access academic publishing infrastructure as commons

Beyond providing mere access to the resource, (being articles or books), an important element for understanding how an open access publishing ecosystem can be governed as commons will be the provision of the underlying infrastructure, the organisation of the review and editorial work, the policy environment of open access mandates and the technical platforms in use.

Analysing publishing as a commons cannot only take into account the legal conditions of the availability of the end product for use and reuse, even if rights described in the previous section are a first necessary element of the ecosystem. In a holistic governance approach including the resource lifecycle, it is important to examine how the resources can be produced and distributed, and how the infrastructure and surrounding community labour can be sustained.

In order to achieve this, I will depart from the perspective of copyright and select parts of Ostromian theoretical frameworks for commons governance, namely Ostrom's Institutional Analysis and Development framework (Ostrom, 1990), Ostrom & Hess's first framework for analysing Knowledge Commons (Hess & Ostrom, 2007a), and Frischmann, Madison & Strandburg's adaptation of the Ostromian framework to Knowledge Commons in the first volume of the 'Governing Knowledge Commons series' (Frischmann, Madison & Strandburg, 2014). I will also rely on more radical theories at the intersection of infrastructure commons and pirate libraries. These instruments can be applied to various steps and dimensions of the academic publishing production process in order to better understand how it can be governed as a knowledge commons.

The framework of the commons focuses on the role of 'commoners', the participants who co-produce, maintain, repair, protect, and govern a shared resource as a commons as users and member of a community: authors, reviewers, editors, librarians, managers. Commoners are active members of a local or a virtual community where the commons is located, developed or used. This section introduces the literature on the state of the art of different types of commons and presents an analytical framework to study the governance of academic commons as a complex type of co-produced commons. Ostrom (1990) designed a set of institutional analytical tools including eight governance design principles based on thousands of case studies of mostly natural and tangible commons. In order to co-produce and manage common goods or resources more or less successfully, communities should have clearly defined group boundaries (1), rules governing the use of common goods or resources should match local needs and conditions (2), those affected by the rules should be able to participate in modifying the rules (3), also make sure that rule-making rights of community members are respected by outside authorities (4), develop a system, carried out by community members, for monitoring members' behaviour (5), use graduated sanctions for rule violators (6), provide accessible, low-cost means for dispute resolution and finally (7), build responsibility for governing the common resource in nested tiers from the lowest level up to the entire interconnected system (8). The first and the latter mean that rules to govern commons are not universal: they should be based on features of the resources and adapted to communities' local contexts and identifying these will be key.

Scholars of the commons, whether sociologists, political scientists, lawyers, historians, anthropologists, engineers or economists, study how the original institutional design principles adapt, and propose new ones suited to other types of commons. Knowledge or digital commons vulnerability results from blocked access, due to intellectual property or private restrictive policies seen as new forms of enclosure. Together with Hess, a research librarian, Ostrom expanded the conceptualisation of those governance principles with a collective book on experiences of how to self-organise, produce and preserve intangible knowledge commons in the digital age (Hess and Ostrom 2007b). Based on the biophysical characteristics of these resources which are non-rivalrous to a certain extent, and the characteristics of the communities, institutional models of the commons are adapted here to analyse various models and incentives for rights licensing based on sharing, value generation, funding, quality-control, sustainability, participation, infrastructure provision, or archiving.

Frischmann, Madison and Strandburg's collective book on knowledge commons (2014) provides eleven case studies exploring cultural and scientific commons. They adapted the Institutional Analysis and Development Framework of Ostrom to the fields of information, innovation and creative works with a set of new research questions which we will use for our study: What does openness mean? What legal structure? What informal norms? What benefits are delivered to members and non-members? What skills are needed? What specific roles for the members? What objectives and dilemmas arise for the members? Among types

of commons whose features are close to platforms hosting academic commons, lessons can be found for infrastructure commons in Frischmann, (2012), who conceptualised commons principles suitable for infrastructure resources including communication infrastructure, which requires commons management (non-discriminatory access), prevention of discrimination amongst users and avoiding liability for hosting harmful or unlawful content.

Following Frischmann (2012) and Benkler on the internet as a commons (2016), one hypothesis is that academic commons platforms need to move beyond political neutrality which characterised Ostrom's original work: commoners creating and governing journals and data platforms, providing knowledge for free, frame it politically as an alternative service to commercial providers, challenging the neoliberal governance of closed access journals where authors and editors are not involved and do not communicate (unlike as in open peer review process, where authors and reviewers are identified). The Community-led Open Publication Infrastructures for Monographs (COPIM) project has been applying Ostrom principles to scholarly publishing communities with governing bodies such as advisory boards and steering Committees with the claim that small non-profit initiatives require less formal decision-making rules and may benefit from adopting the open source 'lazy consensus' approach (Moore and Adema, 2020).

Commons-based ownership of the infrastructure of publishing is crucial at the time of the rent-seeking 'redirection of big publishers' business strategy towards the acquisition and integration of scholarly infrastructure and the tools and services that underpin the scholarly research life cycle, many of which are geared towards data analytics' (Posada and Chen, 2018). For instance, Elsevier purchased SSRN which is not stricly speaking open access, but used by academics as a repository tool. Even if one may want to reform the system towards quality and lower the importance of metrics, it matters that academics are able to control their tools of scholarly production.

2. Models of open access

In this section, I will touch briefly on the forms of open access which are well identified, and provide examples of cases to illustrate how the frame of the commons can be applied to the various forms of open access, and match up with commons principles – from Ostrom's governance framework to open access values – or not.

Copyright policy standards for open access have been developed in the Berlin, Budapest and Bethesda declarations in the 1990s and 2000s and focused on access rather than the development of an infrastructure with governance rules. More recently, the FAIR principles 'Findable, Accessible, Interoperable, Reusable' extended this open access logic to research data. Plan S[1] is a European institutional initiative where members (large funding institutions and major national research foundations) require research to be published in open access journals, platforms or open archives without embargo.

In addition to the Berlin copyright-open access principles focusing on the availability of the resource only, Plan S members have developed technical requirements and governance principles to support the ecosystem through the creation of platforms and to fund publication, thus also attending to the technical infrastructure political economy of academic publishing. (Plan S focuses here on governing the infrastructure of open access as a local commons, rather than on the open access policies and their suitability for all actors outside of the community, here a consortium of large actors). Indeed, as seen in the commons literature, in order to see a commons flourish, not only legal rules have to be organised, but also other governance arrangements have to be made by and for a community – the community being here the members of the consortium composed by European academia major funding agencies, neither smaller scale actors nor other countries. As noted by Poynder, 2019, Plan S was not designed to be inclusive for the Global South and may have negative side-effects on the

entirety of publishing ecology, reinforcing its capitalist features if APC (Article Processing Charges) are the trade-off for immediate open access (Brainard, 2021).

To successfully develop and maintain a commons, Plan S is declaring an intention to support its infrastructure (Plan S principle #3: 'In cases where high-quality open access journals or platforms do not yet exist, the Funders will, in a coordinated way, provide incentives to establish and support them when appropriate; support will also be provided for open access infrastructures where necessary'). Publication fees are accepted since Plan S principle #5 sets a limit: 'when open access publication fees are applied, they must be commensurate with the publication services delivered and the structure of such fees must be transparent to inform the market and funders potential standardisation and capping of payments of fees', in line with Ostrom principle #2 setting proportional equivalence between benefits and costs, a model where Common Pool Resources are not necessarily cost-free for the user unlike as with open access articles. APCs, even with capped amounts, introduce however, both economic and regional inequalities and shift the payment burden from the user or the library to the author or her funder as commercial publishers are now adapting their operations by selling open access for a fee. The Rights Retention Strategy may now push authors towards for-profit companies providing immediate APC gold, rather than publish in University-based and Government-funded diamond journals in order to comply with the CC BY requirement, leading to APC inflation, whereby governmental funders will be subsidising commercial publishers (Brainard, 2021) taking advantage to push for gold rather than green,[2] while the European Community is already contracting a private actor 'to provide the open research publishing infrastructure and editorial services for Open Research Europe'.[3]

In particular alignment with Ostrom principle #4 on monitoring of users and resources, the Plan is establishing a compliance process (Plan S principle #9: 'The Funders will monitor compliance and sanction non-compliant beneficiaries/grantees'), a control of the publication fees, and a focus on quality (Plan S principle #10: 'The Funders commit that when assessing research outputs during funding decisions they will value the intrinsic merit of the work and not consider the publication channel, its impact factor (or other journal metrics), or the publisher').

Local autonomy, Ostrom principle #8, is recognised by Plan S principles #6, #7 and #8 (The Funders encourage governments, universities, research organisations, libraries, academies, and learned societies to align their strategies, policies, and practices, notably to ensure transparency), allowing different timelines and options to accommodate different models for books and monographs. (See Plan S principle #7 'The above principles shall apply to all types of scholarly publications, but it is understood that the timeline to achieve open access for monographs[4] and book chapters will be longer and requires a separate and due process') or as well to transition from hybrid models (Plan S principle #8). This unfortunately postponed the inclusion of books, an important output for social sciences and humanities, from the scope of the plan, whilst gold or green books remain extremely rare (Green, 2017).

2.1 Open access diamond, gold, freemium and platinum

Open access gold journals or books and their variants have different features which also embed the governance principles of commons. In our field of media and communications and critical internet social science, several funding models are implemented, trying to devise sustainability which is neither based on charging authors nor users: 'In the Diamond Open Access Model, not-for-profit, non-commercial organizations, associations or networks publish material that is made available online in digital format, is free of charge for readers and authors and does not allow commercial and for-profit reuse' (Fuchs & Sandoval, 2013: 438).

The University of Westminster Press[5] supports its publications through support (as for this journal[6]) from its university, external contributions, book sales and funder grants

and endeavours to avoid publication fees for authors. *tripleC*[7] journal practices open peer review on Open Journal System platforms, requires university funding for a paid copyeditor, and relies on voluntary editorial labour. There is no publication fee except over 8,000 words. *Internet Policy Review* extends its open peer review arrangements to all reviewers since the comments of the other reviewers are visible on the online platform, which is not commons-based open source like Open Journal Systems (OJS), since it uses GoogleDocs, implementing an open process on a closed platform. There are no publications fees for individual articles. A member of the Radical Open Access Collective[8], *Internet Policy Review*[9] experiments with Open Abstracts a feature 'allowing authors (to) receive peer review within two weeks'[10], and, other than the reviewing platform, uses and develops open tools.

The funding of commons infrastructure, here the development of open access platforms, is crucial to allow the flourishing of open access journals, as underlined by Plan S principles. Open Journal Systems[11] (OJS) provide a complete technical production infrastructure and workflow for gold journals to use. OpenEdition,[12] a platform hosting 550 social sciences journals, requires[13] some curation, quality-controlled peer review of journals before agreeing to host them, including minimum open licensing standards in the application criterias. Many open access publishers use CLOCKSS, a solution to guarantee permanent access through archiving solutions, as well as the Dataverse Network[14] for 'research data, software, bioresources and methodologies' associated to articles, a bigger step towards data commons and open science.

Not going as far as with so-called gold open access authors processing fees, innovative business models are trying to address funding issues through institutions at the macro level. There is the freemium or platinum model developed by OpenEdition with a basic open access and extra institutional services for a fee which can be paid by libraries for activities such as download statistics or the provision of more formats for otherwise open access papers or books in HTML-XML, for example the PDF or one-click export to e-readers formats.

2.2 Green open access

The open archiving model only addresses the provision of a part of the bundle of rights of the resource. It can be achieved through different means: if the journal policy authorises deposit in an open repository or alternatively if authors are hacking or softening publishing contracts through addendum or crossing-out of clauses in journals contracts which would not allow it, or otherwise mandated through funders requirements or national laws requiring that a version of all articles, even and especially those published in closed access commercial journals, must be deposited by their authors in an open archive. Publishers' policies, as well as funders' mandates which were negotiated with commercial publishers, may impose limitations to this model.[15] Sometimes the final published version, with the publisher's page numbers and layout, cannot be made available and only a pre-print, the author's submitted version as a Word document, or a postprint, the accepted version post peer-review but without formatting, might be uploaded in the archive. Sometimes deposit may occur only after an embargo period of several months imposed by the journal or the law (6 months for STEM subjects to as long as 12–24 months after publication for humanities for articles in France[16]). These measures are supposed to guarantee the non-substitutability of the green version and the purchased version. However, an empirical data study showed compliance with open access mandates may be limited since it oscillates between 90 and 23% for work funded by the Social Sciences and Humanities Research Council of Canada (Larivière and Sugimoto, 2018).

2.3 Commonswashing and hybrid models

Some closed access publishers' green policies allow deposit in non-commercial repositories only, which is good news since it removes from the scene platforms such as Academia or ResearchGate, platforms which are practicing *commonswashing*, a concept derived from greenwashing where companies appropriate ethical behaviour (Dulong de Rosnay 2020). These commercial repositories are pretending to support open access and the commons, but by requiring registration and selling users' personal data, they take commercial advantage of academics' reading and citations practices. Publishers have been extremely skillful to take opportunity of the open access turn to extract more from academics than their labour: self-quantifying data and as discussed in the next paragraph, APCs (Moore, 2020). Metrics infrastructure control and ownership is key, and altmetrics standards should either be governed as a commons or abandoned to counter this trend.

Another harsher form of commonswashing is practiced by dominant publishers with a gold commercial policy, such as the misleadingly' named Elsevier Commons programme, which require authors (or their institution) at the micro level to pay an author's fee of several thousands pounds, euros or dollars in order to release their article under a Creative Commons license, as if individual people outside of libraries were actually purchasing articles and publishers were really losing an opportunity of income with green open access. These 'postcolonial open access' (Piron, 2018) models wrongly called green or gold are unfavourable to authors who are not in a position of power.

Mixed economic models vary widely, with some journals such as Hindawi trying to address Global South inequalities by automatically waiving fees[17] (see an analysis of Authors Processing Charges waivers by Lawson, 2015) for those researchers based on their country of affiliation, which is less paternalistic than their second policy for fee reduction where authors are forced to provide a letter signed by an Institutional Head of Department with a verified email address certifying the lack of funding.

2.4 Academic pirate or shadow libraries

Pirate or shadow libraries provide free access without the permission of the publishers. They can be considered as semi-commons, at the margins, in the sense that some of them require some sort of collective action and development. Their commons-like features can include curating decision to choose the scope of knowledge which will be selected and accepted by a platform, thus defining the borders of the community, to reuse the terms of the first Ostrom principle. Bodó Balázs, Lawrence Liang, Marcell Mars and Tomislav Medak, have been leading pioneering empirical and conceptual work on piracy as an infrastructure, and this paper focuses on the underlying infrastructure and the governance of academic publishing as a commons. I therefore propose including pirate academic libraries within the borders of open access models as the largest contributor to access to knowledge (also considered as (black) open access for Green, 2017). Liang differentiates illegal piracy from 'non-commercial piracy such as P2P networks', which are more legitimate and easier to defend ethically.

Political advocacy statements that favour free knowledge like those of Alexandra Elbakyan, the founder of Sci-hub, or Aaron Swartz, a programmer and open access activist (Swartz, 2008) who downloaded a very large amount of articles from JSTOR repository at MIT, got prosecuted, leading to his suicide in 2013 (see Mars and Medak, 2019) illustrate the hypothesis presented in the first section of the paper that academic commons platforms, in order to become successful, need to move beyond political neutrality. Forging the sense of belonging and the identity of a community around common political values has been key to developing some digital or infrastructure commons. Some shadow library are considered as infrastructure

commons where the developers, rather than the works' authors or publishers, are the community. They share with open access institutional actors such as Plan S a sense of rebellion against publishers' abusive business models (Hoquet, 2019), as well as an archival mission and sense of care (Mars and Medak, 2019).

Some pirate libraries have an economic model and may charge a fee for some services, such as the export to Kindle format, in order to cover functioning costs including one free ebook service within Z-library. Their development has been shaped to function around copyright enforcement, making sure that legal and technical infrastructure decisions are definitively part of the equation to maintain the service and ensure its sustainability. Finally, their ergonomics are so simple, that even academics who have access to a well-furnished university library may prefer to use them because of the user experience. Numerous researchers do not use their institutional library portal because authentication and search are too cumbersome, slow and hampered by access-control measures before maybe being able to gain access to a resource (which might be time-protected in the case of books) by, for convenience, just pasting the ISBN or the DOI that unlocks the downloadable PDF on pirate libraries (Seguin, 2019).

In his short history of book piracy, Bodó Balázs (2011) explains 'the functions (copyright pirates) fulfilled in the production and circulation of knowledge' and how at a time of scarcity, they 'introduced cheap reprints that reached new reading publics (and) fueled the development of a deliberative public sphere in Europe and the transfer of knowledge between more and less privileged social groups and regions'. The same function is achieved by academic pirate libraries, allowing a broader audience to access to books for free (see also Balázs, 2018, on the history of LibGen or Library Genesis). The same author (Balázs et al., 2020) however demonstrated, based on the logs of one of the LibGen mirrors, that these libraries are used mostly by Global North academics and might not succeed in closing the knowledge access gap of researchers based in the Global South: 'while richer regions are the most intensive users of shadow libraries, poorer regions face structural limitations that prevent them from fully capitalizing on freely accessible knowledge', most likely due to the lack of infrastructure.

Non-open access academic publishers close their output behind paywalls, making it difficult to read and perform data mining for researchers of all countries, even in the most favoured and well equipped libraries, as well as for citizens, SMEs, NGO, policymakers and regulators without having university credentials who may need to produce evidence-based recommendations and enlarge the community of users of academic commons. Open access policies, still based on the good will of institutions and hosted on centralised repositories, do not enable access to all the research available. Media piracy offers a powerful solution to academics, public and private parties facing problems to access, share and reuse research publications and data.

Some community-maintained academic pirate/peer-to-peer platforms can thus be approached with a commons-based peer-production spirit (Mars and Medak, 2019). I don't study Sci-hub in-depth here since it is a website provider rather than a community where contributors upload their own production. The only commonality it has with a community are the users' donations to ensure financial sustainability and users' sharing of their access codes.

Just as peer-to-peer platforms offering access to music and movies have often a broader cultural diversity than commercial distributors, these platforms can be specialised and share rare, niche content. Their distributed technical architecture permits the sharing of large volumes at high speeds. It provides free hosting for large datasets and can support open access journals or researchers with scarce resources or no server. It may offer anonymous storage to researchers who want to publish their own papers but can't post their postprint version on their institutional website because the publisher's agreement forbids it. Because the data is mirrored, it ensures the preservation of sources even in the case of data loss.

Started in 1997, Aaaaarg is a file-sharing library of pirated academic works, hosting digital copies of books and papers as well as academic conversations. It is not based on a peer-to-peer distributed architecture but relies on a peer-to-peer community to scan and upload files. A legal analysis of Aaaaarg is quite straightforward. It is composed of an index of links to PDF files of books, books which are expensive and hard to get while authors want to be read and to read what they need to cite. When the website gets 'cease and desist' letters from publishers, they take down books, and move the website elsewhere. It is a centrally-organised service, like Napster, more vulnerable to legal attacks, using tactics like the practice of circumventing legal blockages by re-creating the platform with an additional A in the URL.

Created in 2013, Academic Torrents is a distributed platform based on the Bittorrent protocol and allowing researchers to share data and papers. The website asks users to upload only content for which they have a licence, but there does not seem to be any mechanism to check and it seems possible to upload any content. Developed in 2013 by two PhD candidates in Computer Science at the University of Massachusetts Boston, Academic Torrents is a distributed platform based on the Bittorrent protocol allowing researchers to share scientific data and papers. It introduces itself as 'a community-maintained distributed repository for datasets and scientific knowledge', providing a useful hosting service for academic peers, libraries and journals. The website indicates that 'All files must be licensed to legally reshare' and asks users to upload only content for which they have a licence and to indicate a licence allowing sharing in the licence field of the bibtex (GNU GPL, Creative Commons, or similar).

But when uploading the content, there is no mechanism to check if the licencing information indicated is correct and accurate. It seems technically possible to upload any content, whilst leaving blank the field for licensing information (e.g. a dataset). This suggests it is probably in the public domain as data produced by the US federal government, but you have to be knowledgeable to infer that.

At the registration step, the user is asked to provide a username and an email to which she receives a confirmation message indicating that someone from the IP address XXX wants an account and requesting to click a link to confirm the registration. There is no identity checking and IP address could be masked by using TOR (The Onion Router), a decentralised network.

Therefore, the index may host different types of content:

- Legal content: papers and databases entirely authored and produced by the uploader and/or in which they have the rights because they are under a Creative Commons or similar licence,
- Grey content: papers and databases in which the uploader may have the rights, but didn't check with co-authors or human subjects of personal data or the publisher of the paper,
- Illegal content: papers and databases in which the uploader didn't have the rights: someone else's paper, data derived from mining or performing statistics analysis on pre-existing data in which the producer didn't have the rights, data containing personal data without consent of the human subject.

Pirate libraries encounter several legal sustainability challenges: copyright infringement, liability of the service provided, liability of the reusers. Similarly to the uploaders of copyrighted music and the developers of the Pirate Bay, there is a risk of copyright infringement and liability of the contributors, to the extent they can be identified. Since Academic Torrents is hosted in the US and the domain name has been registered in the US the website is vulnerable to legal actions based on domain names and hosting. Another strategy could have been to register the domain name and use a registry not based in the US but in a country with less copyright enforcement. Even then the site would probably be submitted to the jurisdiction

of the US even for non-US users and therefore a DMCA notice and take down requests may be sent to the service by rightsholders to ask to remove possibly infringing content. The index might be closed, and therefore users' data could be lost, as has happened to those who had hosted their legitimate content on Megaupload.

At the time of researching Z-library contained a DMCA notice and allowed rightsholders to claim copyright infringement. On one title the download button was disabled and displayed, the explanation 'Link deleted by legal owner', however immediately followed by the mention that it was possible to use TOR to download it anyway. Providing a link to the course of action with detailed explanations to follow in order to circumvent the thin legal barrier could be proven as non-compliance with the law in some jurisdictions like the US.

There is uncertainty on the legal status of the data and thus liability risk for potential re-users, unless the data was uploaded with a Creative Commons or similar licence and provides accurate attribution and contact information, hinting that the uploader is the rightsholder and/or performed due diligence before uploading the data to be sure they would not infringe someone else's rights. Liability outside of copyright is also possible, as datasets can contain errors, not be up-to-date, or be unfit for purposes. They are made available on an as-is basis, without warranties. Processing of personal data could also trigger liability issues under European regulation such as GDPR, as scientific data can be subject to ethical and privacy constraints. Anonymisation may or may not have been performed correctly by the uploaded, and re-identification by a reuser may happen.

Technical choices can be made by these platforms for better legal sustainability. There are advantages to use a distributed architecture and anonymity protocols. For researchers, pirate libraries help solve the problem of insufficient open access and open data policies and exceptions to copyright. They may offer anonymous storage to researchers who want to publish their own papers but can't post their postprint version on their institutional website because the publisher's agreement forbids it or the posting of their dataset because they use databases on which they hadn't cleared the data mining rights.

Therefore, from the point of view of the researchers, Academic Torrents is supporting their work and filling the gap left by the lack or the inadequacy of exceptions to copyright for research purposes and open access and open data policies. In the case of academic papers, some journals following the green or the gold open access model will allow authors to upload their papers on their own website, including on Academic Torrents. But journals with more restrictive contractual policies may not allow authors to distribute their paper, or only the preprint version, if the publisher required an exclusive transfer of rights from the authors before publication. In that case, Academic Torrents provides a solution to host the papers without risking any liability for copyright infringement of the institutional repository or the University of the academic.

In December 2013, Elsevier issued take down notices based on the DMCA (Digital Millenium Copyright Act) for articles hosted by Academia, a centralised commercial server, which could take advantage of its safe harbour legal provision by promptly removing the content as required by this Act or other intermediary liability laws such as article 14 of the European e-Commerce Directive. In the case of scientific data, reproducibility can only be achieved if the data is available for other researchers to verify scientific findings expressed in a paper. Some journals and institutions are developing services such as Figshare. Academic Torrents offers a complementary service for everybody, without the need to be published or to have finalised data as the service can also be used as a personal hard drive or back up for unfinished research.

For libraries and open access journals, pirate libraries offer performance and cost-efficiency for hosting and preservation, without development, maintenance or hosting costs. Their distributed technical architecture allows the sharing of large volumes at high speeds. It provides free hosting for large datasets and can support open access journals or researchers with scarce

resources or no server. Because the data is mirrored, it ensures the preservation of sources even in the case of data loss. Just as peer-to-peer platforms offering access to music and movies have often a broader cultural diversity than commercial distributors, these platforms can share any rare content and preserve content even if the producer does not have an institutional repository.

Also, for libraries, data journals and universities, reusing the protocol and API of Academic Torrents could provide a much more perennial hosting solution than the servers of those in the commercial business of academic papers and the sharing and production of analytics (Academia, ResearchGate, Google Scholar) while providing true open access to the data and state-of-the-art indexation, without requiring subscription or using closed standards or making a profit out of the data produced by the researchers. Even if the system crashes, mirroring will ensure the data is available elsewhere.

Instead of going gold and having to pay elsewhere, or going green and facing possible limits, an option for some academics is to become their own academic pirate and themselves share their own content even without permission of their open access-averse publishers.

In the UK and the EU, data mining is an exception to copyright law done for research purposes, but this is not the case in other countries (Bottis et al., 2019). If commercial publishers' strategy is to propose another licensing fee for datasets, piracy, if that is the name of copyright infringement, would be a way for researchers to perform data mining work. None of these initiatives are true commons, and another step would be to apply the framework of the commons to academic production to replace the journal model. As the academic community is already underpinning production, from writing to editing and peer review, some journals merely provide the coordination and the quality brand, which could be brought 'in-house' at the level of the university or output in a peer-to-peer manner. Some initiatives such as the LIBRE open peer review platform, however, did not come to fruition.[18]

3. Advocating for open access as Knowledge Commons, an actions repertoire – from individual responsibility to institutional policy

In this last section, I present authors' possible actions to support academic commons. Authors are copyright holders but in a system with in-built power imbalance when faced with commercial journals with high impact factors which appear to offer immediate benefits to one's career, promotion and evaluation, except in a qualitative system where a work's intrinsic quality has primacy over publication venue impact factor (Plan S principle #10[19]). A repertoire of such actions can be structured progressively, starting with initiatives which already belong to collective governance practices (3.1), followed by less mainstream, more radical individual decisions which will have an impact on the open access ecosystem.

3.1 Collective initiatives to encourage green

Self-archiving is the first degree of open access advocacy. The DOAJ provides guidance as to what/when authors can deposit their production. If deposit is not possible, authors can individually try to amend their publishing contract for the publisher to allow green open access. SPARC developed an addendum to help authors to modify their contracts. At the institutional level, libraries can assist green OA and universities can establish and fund training. In some countries such as the UK, librarians seem to have been more successful in enabling green open access and many universities employ library staff to deposit faculty articles. However, in many other countries, green self-archiving is far from the norm. Most book publishers do not allow deposit (Green, 2017). And the majority of academics do not deposit: less than a third of physicists in Nigeria (Abdu & Maidabino, 2019), 13% in Spain in 2016 (Borrego, 2017), demonstrating the need for more collective action and political outreach targeting academics. A

political collective turn to open access would be needed to counter-balance 'individuation by infrastructure' of quantifiable academics, commodified by the industry (Moore, 2020).

3.2 Individual radical behaviours

If green is not possible, authors could decide to self-deposit anyway their own work, but in a pirate library like the ones mentioned in the previous section. The first FAQ for the book library is: 'How to upload books?'[20] and the drag and drop function allows academics to upload their own books. What academics face is an ethical conundrum to decide whether to share £200 conference proceedings or books edited at academic university presses or companies with two-figure profit margins for shareholders while most of the work has been performed by the academic editor, *vs* a book sold for £20 and edited by an independent or an academic publisher with a genuine editorial function required to recoup operating costs. Encouraging the uploading of one's work into a pirate library could be seen by some as a sign of support to infringe the law and morally difficult to defend, claims Liang (2009), recalling that Lessig (2004) bases the distinction on the transformative potential for creativity of free culture. Liang explains that copyleft supporting active creation would be easier to support morally for some than commercial 'piracy', geared towards consumption and as such suspected of lesser moral standing. Nevertheless, copyright flows from the hand of the original author and it is after the imposition of unfair contracts that some publishers do not authorise green open access deposit in institutional archives. Parallel economy copyshops have been the only way in some countries to access knowledge such as movies but also academic literature, a higher moral duty regardless of the nature of the content (ibid), an argument which might help academics to overcome moral reluctance to self-deposit their closed access works in shadow libraries.

3.3 Systemic changes

Other individual behaviours might include the following. Authors may decide to only review for open access gold journals, with the signature of an open access pledge. Authors may decide to only accept board and editorial positions in open access journals. Authors may decide to only publish in open access journals and boycott publishers such as Elsevier (Fuchs & Sandoval, 2013: 429). Academics may decide to work as authors, editors and reviewers only for diamond open access journals.

But these behaviours are not sustainable if not supported at the institutional level, and in a neoliberal environment, they could be limiting for one's career and promotion. As written in an article in 2001, 'the future virtual academe can instigate institutional mechanisms for governing the academic commons', (Hellström, 2003). Even if this turn has not been adopted by the neoliberal governing principles at the top levels, reform can be achieved at lower community levels. At the level of university administrators, since academia is not governed as a commons, academics are submitted to a legal system dominated by the bureaucratic (Graeber, 2015) layers edicting rules and norms of conduct. Even if they are composed of current or former academics, their role is not the same and is set apart from trade union representatives of the community in commissions – they cannot be assimilated to peer governance as in real commons. They need to be lobbied and infiltrated by allies in order to achieve reform. 'Policy makers, academics and publishing workers of all lands unite!' (Fuchs & Sandoval, 2013: 442). Before more radical collective changes, departing from the neoliberal system which might be better supported by more radical theories of the commons than the Ostromian school, there are two goals for reform towards academic commons which seems achievable in the short term within the neoliberal administrative culture: to enact policies and budgets to support green and gold economic sustainability, and at least tolerate and not penalise radical individual and institutional choices.

Before changing the system because it requires a transformation of 'what is a scientific author', as analysed in the proceedings on an eponymous 1997 conference (Biagioli, 2013), scientific authorship rewards as 'symbolic credits' functions according to disciplinary community rules, which are different from the economic incentive provided by copyright developed to support the publishing cultural industry. '[T]ruth and novelty' and quality should replace citations metrics for the assessment of the value of a work and a researcher. (Concerning academic capitalism, and matters such as the privatisation of the intellectual commons, see Jessop, 2017, and on citations metrics as a capitalist institution in the Gramscian sense, see Kapeller, 2010). Progress on all of this depends on the system of promotion, hiring and funding applications evaluation. As experts or committee members, senior academics with more power need to decide to also consider adherence to open access principles rather than only impact factor in the evaluation of publications venues, in addition to considering the quality of the work rather than the reputation of the outlet and neoliberal impact factors, following Declaration on Research Assessment (DORA) principles.[21] Finally, as administrators with power to change academic policies, senior or former academics could lobby to amend informal and formal rules, and work to transform the culture in their local universities, national institutions, or academic international associations. More broadly than for academic commons, many legal scholars and activists have long been advocating for laws and policies to better support access to Knowledge Commons, or to consolidate these via a legal status, with limited success so far (Boyle, 1996, more recently Dulong de Rosnay & De Martin, 2012; Mattei, 2013; Rodotà, 2013; Marella, 2017; Broumas 2020).

Conclusion

This article analyses open access publishing as knowledge and infrastructure commons. The first degree of open access pertains to the legal affordances of academic resources, which can be made available under Creative Commons licenses, allowing the means to segment copyright ownership and offer to the public various levels of use, from only reading to also reusing in commercial training, translating and reselling, or mining for research purposes.

But academic commons include much more than the legal availability of the resources. Academic publishing infrastructure can be provided and governed as a commons. The theoretical framework of knowledge and infrastructure commons focuses on community and enables a better understanding of publishing platforms' organising, economic and legal principles.

Open access models include APCs (gold, green, platinum, diamond and even black with pirate or shadow libraries), and a range of these policies, governance, economic and technical features of publishing platforms can be studied as infrastructure commons. Sustainable academic commons require a mix of individual behavioral changes, collective actions, institutional changes, and most importantly, funding open access infrastructure as a commons.

Notes

[1] See https://www.coalition-s.org.
[2] See https://oaspa.org/open-post-the-rise-of-immediate-green-oa-undermines-progress.
[3] See https://www.eoscsecretariat.eu/news-opinion/open-access-publishing-platform.
[4] See https://www.coalition-s.org/faq/how-will-plan-s-affect-trade-books.
[5] See https://www.uwestminsterpress.co.uk.
[6] See https://www.westminsterpapers.org/submissions/.
[7] See https://www.triple-c.at.
[8] See http://radicaloa.disruptivemedia.org.uk.
[9] See https://policyreview.info.
[10] See https://policyreview.info/open-abstracts.
[11] https://pkp.sfu.ca/ojs.

[12] https://www.openedition.org.
[13] https://www.openedition.org/10824?lang=en.
[14] https://dataverse.org.
[15] The Sherpa Romeo resource provides open access publishers policies: https://v2.sherpa.ac.uk/romeo.
[16] 2016 French law for a digital republic. LOI n° 2016–1321 du 7 octobre 2016 pour une République numérique, article 30. https://www.legifrance.gouv.fr/eli/loi/2016/10/7/ECFI1524250L/jo/texte.
[17] https://www.hindawi.com/publish-research/authors/waiver-policy.
[18] See https://www.openscholar.org.uk/libre.
[19] See https://www.coalition-s.org/plan_s_principles.
[20] Note https://booksc.org/faq.php.
[21] See https://sfdora.org/read.

Competing Interests

The author was a board member of OpenEdition (2009–2020) and Creative Commons France legal lead (2003–2013).

References

Abdu, A. H., & **Maidabino, A. A.** (2019). Awareness and perception of physicists towards self-archiving in arxiv.org open access repository in northwestern Nigeria. *UNIZIK Journal of Research in Library and Information Science*, *4*(1/2), 36–49.

Anderson, K. (2018). Focusing on value — 102 things journal publishers do (2018 Update). *The Scholarly Kitchen*. https://scholarlykitchen.sspnet.org/2018/02/06/focusing-value-102-things-journal-publishers-2018-update/

Balázs, B. (2011). Coda: A Short History of Book Piracy. In J. Karaganis (Ed.), *Media Piracy in Emerging Economies* (pp. 399–413). New York: Social Science Research Council. http://hdl.handle.net/10438/8526

Balázs, B. (2018). The Genesis of Library Genesis: The Birth of a Global Scholarly Shadow Library. In J. Karaganis (Ed.), *Shadow Libraries: Access to Knowledge in Global Higher Education* (pp. 25–51). Cambridge, MA: MIT Press.

Balázs, B., Antal, D., & **Puha, Z.** (2020). Can scholarly pirate libraries bridge the knowledge access gap? An empirical study on the structural conditions of book piracy in global and European academia. *PLOS ONE*, *15*(12), e0242509. DOI: https://doi.org/10.1371/journal.pone.0242509

Barron, A. (2014). Intellectual Property and the 'Open' (Information) Society. In M. David & D. Halbert (Eds.), *The SAGE Handbook of Intellectual Property* (pp. 4–27). London: Sage.

Benkler, Y. (2016). Degrees of freedom, dimensions of power. *Daedalus*, *145*(1), 18–32. DOI: https://doi.org/10.1162/DAED_a_00362

Biagioli, M. (2013). Rights or Rewards? Changing Frameworks of Scientific Authorship. In M. Biagioli & P. Galison (Eds.), *Scientific Authorship: Credit and Intellectual Property in Science* (pp. 253–279). New York: Routledge. DOI: doi.org/10.4324/9780203954270

Borrego, A. (2017). Institutional repositories versus ResearchGate: The depositing habits of Spanish researchers. *Learned Publishing*, *30*(3), 185–192. DOI: https://doi.org/10.1002/leap.1099

Bottis, M., Papadopoulos, M., Zampakolas, C., & **Ganatsiou, P.** (2019). Text and data mining in the EU 'Acquis Communautaire' tinkering with TDM & digital legal deposit. *Erasmus Law Review*, *12*(2), 190.

Boyle, J. (1996). *Shamans, Software, and Spleens: Law and the Construction of the Information Society*. Cambridge, MA: Harvard University Press.

Brainard, J. (2021). Open access takes flight. *Science*, *371*(6524), 16–20. DOI: https://doi.org/10.1126/science.371.6524.16

Broumas, A. (2020). *Intellectual Commons and the Law: A Normative Theory for Commons-Based Peer Production*. London: University of Westminster Press. DOI: https://doi.org/10.16997/book49

Darnton, R. (2014). A world digital library is coming true! *New York Review of Books*, 8–11.

Dulong de Rosnay, M. (2010). From Free Culture to Open Data: Technical Requirements for Open Access. In D. Bourcier, P. Casanovas, M. Dulong de Rosnay & C. Maracke (Eds.), *Intelligent Multimedia. Sharing Creative Works in a Digital World, 8*, 47–66. Florence: European Press Academic Publishing.

Dulong de Rosnay, M., & **De Martin, J. C.** (Eds.). (2012). *The Digital Public Domain: Foundations for an Open Culture*. Cambridge: Open Book Publishers. DOI: https://doi.org/10.11647/OBP.0019

Dulong de Rosnay, M., & **Janssen, K.** (2014). Legal and institutional challenges for opening data across public sectors: Towards common policy solutions. *Journal of Theoretical and Applied Electronic Commerce Research (JTAER)*, *9*(3): 1–14. DOI: https://doi.org/10.4067/S0718-18762014000300002

Dulong de Rosnay, M. (2020). Commonswashing – A political communication struggle, *Global Cooperation Research – A Quarterly Magazine*, *2*(3), 11–13. https://www.gcr21.org/publications/gcr/gcr-quarterly-magazine/global-cooperation-research-3-/-2020

Elkin-Koren, N. (2005). What contracts can't do: The limits of private ordering in facilitating a creative commons. *Fordham Law Review*, *74*(2), 375–422.

Emmett, A. R. (2015). Roman law, private property and the public domain: Lessons for copyright policy. In B. Fitzgerald & J. Gilchrist (Eds.), *Copyright Perspectives.* Cham: Springer. DOI: https://doi.org/10.1007/978-3-319-15913-3_3

Frischmann, B. M., Madison, M. J., & **Strandburg, K. J.** (Eds.). (2014). *Governing Knowledge Commons*. Oxford: Oxford University Press. DOI: https://doi.org/10.1093/acprof:oso/9780199972036.001.0001

Fuchs, C., & **Sandoval, M.** (2013). The diamond model of open access publishing: Why policy makers, scholars, universities, libraries, labour unions and the publishing world need to take non-commercial, non-profit open access serious. *tripleC: Communication, Capitalism & Critique*, *11*(2): 428–443. DOI: https://doi.org/10.31269/triplec.v11i2.502

Graeber, D. (2015). *The Utopia of Rules: On Technology, Stupidity, and The Secret Joys of Bureaucracy*. Brooklyn, NY: Melville House.

Green, T. (2017). We've failed: Pirate black open access is trumping green and gold and we must change our approach: How can publishers see off the pirates? *Learned Publishing*, *30*(4), 325–329. DOI: https://doi.org/10.1002/leap.1116

Hellström, T. (2003). Governing the virtual academic commons. *Research Policy*, *32*(3): 391–401. DOI: https://doi.org/10.1016/S0048-7333(02)00011-2

Hess, C., & **Ostrom, E.** (2007a). A Framework for Analyzing the Knowledge Commons. In *Understanding Knowledge as a Commons: From Theory to Practice*. Cambridge, MA: MIT Press. DOI: https://doi.org/10.7551/mitpress/6980.001.0005

Hess, C., & **Ostrom, E.** (Eds.). (2007b). *Understanding Knowledge as a Commons: From Theory to Practice*. Cambridge, MA: MIT Press. DOI: https://doi.org/10.7551/mitpress/6980.001.0001

Hoquet, A. (2019). Qui veut la peau de Sci-hub? *The Conversation*. https://theconversation.com/qui-veut-la-peau-de-sci-hub-114794

Johnson, D. R. (2007). Reflections on the bundle of rights. *Vermont Law Review*, *32*(247): 248–271.

Kapeller, J. (2010). Some critical notes on citation metrics and heterodox economics. *Review of Radical Political Economics*, *42*(3), 330–337. DOI: https://doi.org/10.1177/0486613410377855

Larivière, V., Haustein, S., & **Mongeon, P.** (2015). The oligopoly of academic publishers in the digital era. *PLOS ONE*, *10*(6), e0127502. DOI: https://doi.org/10.1371/journal.pone.0127502

Larivière, V., & **Sugimoto, C. R.** (2018). Do authors comply when funders enforce open access to research? *Nature*, *562*(7728), 483–486. DOI: https://doi.org/10.1038/d41586-018-07101-w

Lawson, S. (2015). Fee waivers for open access journals. *Publications*, *3*(3), 155–167. DOI: https://doi.org/10.3390/publications3030155

Lawson, S. (2019). *Open Access Policy in the UK: From Neoliberalism to the Commons*. PhD. Birkbeck, University of London. DOI: https://doi.org/10.17613/ktz2-w249

Lessig, L. (2004). *Free Culture: The Nature and Future of Creativity*. New York: Penguin Press.

Liang, L. (2009). Piracy, creativity and infrastructure: Rethinking access to culture. *SSRN Electronic Journal*. DOI: https://doi.org/10.2139/ssrn.1436229

Loder, J., Bunt, L., & **Wyatt, J.** (2013). Doctor know: A knowledge commons in health. *Young Foundation Report*. Available at: https://www.youngfoundation.org/publications/doctor-know-a-knowledge-commons-in-health/

Marella, M. R. (2017). The commons as a legal concept. *Law and Critique*, *28*(1), 61–86. DOI: https://doi.org/10.1007/s10978-016-9193-0

Mars, M., & **Medak, T.** (2019). System of a Takedown: Control and De-commodification in the Circuits of Academic Publishing. In G. Bachmann, T. Beyes, M. Bunz & W. H. K. Chun (Eds.), *Archives* (pp. 47–68). Minneapolis, MN: University of Minnesota Press/Meson Press. DOI: https://doi.org/10.14619/1501

Mattei, U. (2013). Protecting the commons: Water, culture, and nature: The commons movement in the Italian struggle against neoliberal governance. *South Atlantic Quarterly*, *112*(2), 366–376. DOI: https://doi.org/10.1215/00382876-2020244

Moore, S. (2018a). The 'Care-full' Commons. In J. Deville, S. Moore & T. Nadim (Eds.), *The Commons and Care*. Coventry: Post Office Press. DOI: https://doi.org/10.17613/M6901ZF54

Moore, S. (2018b). What is the relationship between the commons and open access publishing? *Samuel Moore – publishing, scholarly communication, commons* [blog]. Available at: https://www.samuelmoore.org/2019/08/17/what-is-the-relationship-between-the-commons-and-open-access-publishing/

Moore, S. A. (2020). Individuation through infrastructure: Get full text research, data extraction and the academic publishing oligopoly. *Journal of Documentation*, *77*(1), 129–141. DOI: https://doi.org/10.1108/JD-06-2020-0090

Moore, S., & **Adema, J.** (2020). Community governance explored. *COPIM*. DOI: https://doi.org/10.21428/785a6451.20a5c646

Orsi, F. (2013). Elinor Ostrom et les faisceaux de droits: l'ouverture d'un nouvel espace pour penser la propriété commune. *Revue de la régulation*, *14*(2). DOI: https://doi.org/10.4000/regulation.10471

Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press. DOI: https://doi.org/10.1017/CBO9780511807763

Piron, F. (2018). Postcolonial Open Access. In J. Schöpfel & U. Herb (Eds.) *Open Divide: Critical Studies on Open Access* (pp. 117–26). Sacramento, CA: Library Juice Press.

Poynder, R. (2019). Plan S and the Global South – What do countries in the Global South stand to gain from signing up to Europe's open access strategy? *LSE Impact Blog*, 6 March.

https://blogs.lse.ac.uk/impactofsocialsciences/2019/03/06/plan-s-and-the-global-south-what-do-countries-in-the-global-south-stand-to-gain-from-signing-up-to-europes-open-access-strategy

Posada, A., & **Chen, G.** (2018, 15 June). Inequality in Knowledge Production: The Integration of Academic Infrastructure by Big Publishers. *22nd International Conference on Electronic Publishing*. DOI: https://doi.org/10.4000/proceedings.elpub.2018.30

Rodotà, S. (2013). Constituting the Commons in the Context of State, Law and Politics. In *Economics and the Common(s): From Seed Form to Core Paradigm. A Report on an International Conference on the Future of the Commons*. Berlin: Heinrich Böll Foundation.

Sample, I. (2012). Harvard University says it can't afford journal publishers' prices. *The Guardian*. https://www.theguardian.com/science/2012/apr/24/harvard-university-journal-publishers-prices

Seguin, J. (2019). The future of access: How a mosaic of next-gen solutions will deliver more convenient access to more users. *Information Services & Use*, *39*(3), 237–242. DOI: https://doi.org/10.3233/ISU-190049

Suber, P. (2007). Creating an intellectual commons through open access. In C. Hess & E. Ostrom (Eds.), *Understanding Knowledge as a Commons*: *From Theory to Practice* (pp. 171–208). Cambridge, MA: The MIT Press. DOI: https://doi.org/10.7551/mitpress/6980.003.0011

Suber, P. (2016). *Knowledge Unbound: Selected Writings on Open Access, 2002–2011*. Cambridge, MA: The MIT Press. DOI: https://doi.org/10.7551/mitpress/8479.001.0001

Swartz, A. (2008). Guerilla Open Access Manifesto. July. Available at: https://archive.org/stream/GuerillaOpenAccessManifesto/Goamjuly2008_djvu.txt

How to cite this article: Dulong de Rosnay, M. (2021). Open Access Models, Pirate Libraries and Advocacy Repertoires: Policy Options to Construct and Govern Academic Knowledge Commons. *Westminster Papers in Communication and Culture,* 16(1), 46–64. DOI: https://doi.org/10.16997/wpcc.913

Submitted: 21 October 2020 **Accepted:** 05 February 2021 **Published:** 31 March 2021