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Intellectual Property Rights: Issues for Creation of Institutional Repository

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ABSTRACT

The present scholarly publishing system, at best can be described as a monolithic complex tangle of monopolistic publishers and their stringent copyright policies for content, which to say the least, are not in the author's or society's interest. The open access (OA) movement has brought a whiff of fresh air and is fast emerging as a possible solution to the problem of 'chained content'. It has spawned several initiatives, which in their own way propose to change the way people publish and share scholarly content. Institutional repository (IR) is becoming one of the most popular tools for self-archival and dissemination of an organisation's intellectual or scholarly output. The primary objective is not just preservation or changing the scholarly publication process, but showcasing the institution's research or work to the outside community. The IR serves as A tangible indicator of an institution's quality, thus increasing its visibility, prestige, and public value. One of the biggest roadblocks to self-archiving is the copyright policies of publishers, which may not allow or allow self-archiving with associated riders. Intellectual Property Rights (IPRs) issues and content licensing are major policy issues from creation and depositing content in an IR. The paper examines the implications of copyright in the context of populating IR.

Keywords: Institutional repository, self-archiving, open access, copyright, scholarly publishing, green road, project RoMeo, gold raod

1. INTRODUCTION

The scholarly publishing is undergoing a churning phase, wherein lot of factors like the open-access movement via self-archiving and open access (OA) journal publishing, open-archives initiative (OAI), opensource software, and development of cheap computing and storage costs are playing a major role in changing the whole paradigm. Helping the cause is the meteoric rise in prices of journals and consequent drop in library subscriptions. For long, scholarly content has been chained because of the stringent policies of traditional subscription-based, for-profit monopolistic publishers. Stray initiatives for OA were taken in the ahead recently with more vocal support from the scholarly community. Though there are reservations about OA with people casting their apprehensions about the peer-review process of OA papers, impact factors, publication costs, and dissemination/access interfaces the movement is surely gaining momentum and looks promising enough if some initial glitches are ironed out. IRs are becoming prevalent as the most preferred route to self-archiving. They are providing a centralised system for content capturing, organising, storage, retrieving, disseminating, and preservating from a single interface thus acting as a scholarly content management system. One of the chief roadblocks

past but the movement has taken a strong leap

to OA is the copyright issues of intellectual content. As most of the authors rather gift away their invaluable rights over their published research to the publishers, it becomes a very onerous task to populate the IRs.

2. INTELLECTUAL PROPERTY RIGHTS

The IPRs, very broadly, are rights granted to creators and owners for their intellectual creativity in the industrial, scientific, literary, and artistic domain. The work can be in the form of an invention, a manuscript, a suite of software, or a business name. In general, the objective of IPRs is to protect the rights of the creators/owners and at the same time allow the general public to access their creativities. IPRS maintain this balance by putting in place time-limits on the creators/owners mean of controlling a particular work. The law that regulates the creation, use and control of the protected work is popularly known as Intellectual Property (IP) Law.¹

PRS are mainly statutory rights that allow the creators/owners of the products to prevent people from using the same commercially for a certain period of time. IPRS issues have today taken a global shape in the form of World Intellectual Property Organisation (WIPO) and Trade-related Intellectual Property Rights (TRIPS) agreement. The principal IPRs are copyright, patents, trademarks, registered designs, geographical indicators, anti-competitive policies in contractual licenses, and trade secrets. Research and development (R&D) involves a lot of funding and human intellectual efforts. The result of R&D like products and processes, innovations/inventions, new designs, literary and artistic work, generally turning out in financial gains to their inventors, authors or creators, and thus are registered under one or the other heads of IPRs. The authors or creators can opt for a legal action when their IPRs are infringed. Since copyright of scholarly content is the primary theme of this paper, it is discussed in detail in the next section.

3. COPYRIGHT

Copyright stands for the legal rights exclusively given for a definite period of time to the authors or creators of intellectual work such as a publication or an artistic or a literary work for sale or any other use. Copyright in such cases provides the authors/ creators the rights of ownership and legal protection against unlawful reproduction of such work. Besides, providing the legal protection against unlawful reproduction and use of their work, the copyright also recognises the benefits accrued by the reproduction or usage of their creative works by others. This obviates an agreement between the authors and the publishers (or users). The time span for which the law provides the copyright protection varies in different countries depending upon their regulations. It is life time of the author and a term of 60 years after the death of the author in India, 50 years in UK and USA, and 70 years in the European Union. After the expiry of the copyright period, the work falls into the public domain and then can be used by anyone without authorisation. The salient features of copyright are:

- % Protection of aesthetic creations without formalities.
- ℜ Registration not necessary.
- ℜ Protection of expression of ideas only, not the ideas themselves.
- % No concern with the quality of the work.
- ℜ Protection to original work only.²

Copyright grants certain exclusive rights to its owner. Based on these rights, the copyright owner can copy the work, issue copies of the work to the public, rent or lend the work to the public, perform, show or play the work in public, communicate the work to the public (including broadcasting and electronic transmission), and can adapt of the work or do any of the above in relation to an adaptation.

Copyright is said to be infringed when one of the exclusive rights of the owner is performed by a party without the consent or authorisation of the owner. This infringement is called primary infringement. Providing accessories for infringing the exclusive rights or assisting in the making or distribution of infringing rights is also treated as an infringement and is referred to as secondary infringement.¹

4. COPYRIGHT FOR SCHOLARLY CONTENTS—PROTECTION OR STRANGLEHOLD?

Research and development (R&D) generates scholarly content, which is published in different forms by publishers. This cycle involves funding by an organisation for R&D documentation of the research being carried out and its ultimate publication as research papers. The papers go through a peerreview process in which referees put in their efforts to evaluate the content. The government or other bodies extend grants, financial assistance, and budgetary support to these institutions, which of course is tax payer's money. The irony of the fact is that after such gargantuan efforts the biggest beneficiary is the publisher who laughs all the way to the bank along with the copyright of the content. The author is just left with a small satisfaction of his work getting published.

If we perceive all this on a societal platform, then the net gain to society at large is negated totally because of the narrow mindset of the publishers. All the leading publishers get a copyright transfer form signed by the author as soon as he submits a work and there goes the 'baby along with the bath water'. The solution to this rampant copyright stranglehold may lay in choosing the OA way or choosing journals that offer non-exclusive licenses, choosing journals with user-friendly licenses and amending existing licenses, granting publishers the exclusive and nontransferable right of first commercial publication, distribution and sale of work, and keeping copyright with the author.

5. OPEN ACCESS—THE REDEEMER

Researchers and scholars require access to relevant scholarly literature for furthering their existing knowledge. This literature is becoming harder to acquire as it is interdisciplinary, priced too high, voluminous, and stashed behind licensed restrictions. The richest of libraries find it difficult to satisfy their scholars need for specialised literature, while the poorest barely can handle the most rudimentary of queries. The OA movement can be a critical factor to combat this issue.

OA has emerged as a cost-effective way to disseminate and use information. It is being widely accepted as an alternative to the traditional subscriptionbased publishing model. The Budapest Open Access Initiative (BOAI) defines OA as Freely availability of the articles on 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 for any other lawful purpose, without financial legal or technical barriers other than those inseparable from gaining access to the Internet itself".³

OA refers to work that is created with no expectation of direct monetary return and made available at no cost to the reader on Internet for purposes of education and research. OA does not apply to materials for which the authors expect to generate revenue. The authors retain copyright for their articles with right to disseminate these to anyone. OA is intended to be free for readers, not free for producers. It focuses on academic research, and is concerned with scientific and research texts that scholars give to the community without expectation of direct monetary return, including peer-reviewed journal articles, pre-prints, preliminary findings, and data sets.

Establishing OA as a worthwhile procedure ideally requires the active commitment of each and every individual producer of scientific knowledge, and holder of cultural heritage. OA contributions include original scientific research results, raw data and metadata, source materials, digital representations of pictorial and graphical materials, and scholarly multimedia material. OA contributions must satisfy two conditions:

- (i) The author(s) and right holder(s) of such contributions grant(s) to all users a free, irrevocable, worldwide right of access and a license to copy, use, distribute, transmit and display the work publicly, and to make and distribute derivative work in any digital medium for any responsible purpose, subject to proper attribution of authorship (community standards will continue to provide the mechanism for enforcement of proper attribution and responsible use of the published work, as they do now), as well as the right to make small numbers of printed copies for their personal use.
- (ii) A complete version of the work and all supplemental material, including a copy of the permission as stated above in an appropriate standard electronic format is deposited (and thus published) in at least one online repository using suitable technical standards (such as the OA definitions) that is supported and maintained by an academic institution, scholarly society, government agency, or other well-established organisation that seeks to enable OA, unrestricted distribution, inter operability, and long-term archiving."

So in short, OA can be achieved when rights holders decide to give some of their rights away to the end-user. Because copyright law is regulatory, rights holders are entitled to decide whether to cede some of their rights. The full merit of the strict reading of the definition of an OA contribution according to the Berlin Declaration is that it makes clear that initiatives by (groups of) private authors are required to advance a public goal.⁴

Authors are also somewhat responsible for the current state of affairs as they take the least interest in the copyright issues of their own content. According to a study 30 per cent of the respondents do not know who initially owns the copyright of their own research articles, and 26 per cent of these respondents indicated a low interest in the copyright issues of their own research articles.⁵

OA publishing takes two routes, i.e., OA journal publication (termed as the Gold road to OA), OA

self-archiving (the Green road to OA), Self-archiving can be achieved in at least three ways: putting articles on author's personal websites, depositing articles in disciplinary archives, and depositing articles in IR.

OA repositories provide access to the world's research, thus increase the democratisation of knowledge, and suggest that repositories can also contribute in terms of the larger impact of research—the 'social good'. There are clear benefits to society and to the tax payers by indirectly funding a large proportion of scholarly research. Peter Suber characterises the core concept of OA as: Open access removes 'price barriers' (e.g., subscription fees) and "permission barriers" (e.g., copyright and licensing restrictions) to "royalty-free literature" (i.e., scholarly works created for free by authors), and making them available with "minimal use restrictions" (e.g., author attribution).⁶

6. INSTITUTIONAL REPOSITORIES— THE WEAPON

An IR is a digital archive of an institution's intellectual capital. IRs generally adheres to an OA model, by centralising and preserving the knowledge of an institution and making it accessible over a network, preferably Internet. IRs are not disciplinespecific, and aims to archive the entire range of an institution's scholarly output. IRs form part of a larger global system of repositories, which are indexed in a standardised and searchable way, using one interface, (thanks to a common protocol, OAI-PMH) by harvester software, providing the foundation for a new model of scholarly publishing. The paradigm shifts in the social and technological arena surrounding the information and knowledge cycle or generation of scholarly literature are indications of the radical shift towards IRs.

An IR is defined as a web-based database (repository) of scholarly material, which is institutionally defined (as opposed to a subject-based repository); cumulative and perpetual (a collection of records); open and interoperable (e.g., using OAI-compliant software); and thus collects, stores and disseminates (is part of the process of scholarly communication).⁷

IRs may contain pre-prints/post-prints of research articles, research reports, conference papers, teaching materials, project reports, doctoral theses and dissertations, datasets resulting from research projects, committee papers, computer software, and works of art, photographs, audio/video recordings, patents, standards, and the like. It may cover content of which copyright is owned by the workforce or institution, or for which permission has been obtained from the publisher to include a copy of the content in the repository. Thus, an IR should not contain content for which suitable copyright or licensing arrangements have not been made. The content of the IR is institutionally bounded, scholarly in nature, cumulative in growth and perpetual in access.

Salient features and benefits of IRs may be listed as:

- ✗ Collection, preservation, and dissemination of an institution's collective scholarly resources.
- ✗ Act as significant pointers of an institution's academic or research quality.
- ✗ Collation of the intellectual capital of an institution on a single podium instead of diffusing it in diverse publications.
- Wider accessability and visibility to institution's research.
- Protection to authors from copyright sharks (publishers).
- % Challenges the monopoly of publishers.
- ℜ Free and OA to content (global access to local content).
- M Demonstrates institution's scientific, social and financial value.
- Provides measurable indicators of institutional productivity and increase in its prestige.
- ℜ Reduces the time lag between a pre-print and a post-print thus facilitates more timely access to research and scholarship.
- ✗ Centralised storage to help carry out research auditing with ease, and acts as a central archive of author's research profiles.
- Captures unconventional research material such as datasets, video, and audio which cannot be generally accommodated in traditional journals.

Journals are not getting any cheaper, rather the cost of procuring them is becoming exorbitant and out of the reach of many research institutions. This in turn may decrease the readership and access to most of the intellectual content. Herein lies the major role of the IRs, i.e., to break the shackles of monopolistic publishers and focus more on the intellectual content generated by organisations. A study carried out by Steven Harnad, has revealed that openly accessible research has a higher frequency of getting cited and also that the impact ratio of OA to non-OA research has increased from 1 per cent to 18 per cent and citation from 253 per cent to 557 per cent during 1991-2001.8

There may be various reasons as to why an institution should go for the IR approach. These include long term preservation of knowledge, wider access to content or simply, centralised organisation of information. The creation of an IR would provide the institution a tool to manage its information assets, thereby providing greater control over its local knowledge economy, and retaining copyright and IPRs of work within the institution. Once an institution opts to set up an IR, it has to consider manifold issues, having both, technical and social hues as outlined below.

6.1 Content

The first step towards creating an IR include establishment of content guidelines. Importantly, it would enlist policies regarding the nature of the content to be deposited (pre-prints, post-prints, working papers, technical reports, etc.) and format of content. This should be done before the implementation of the software tool, as it will have implications on metadata and information fields.

6.2 Technology

This is the stage where a decision regarding the IR software has to be taken by the implementers. Lots of choices (both commercial and open source) are there, but it depends upon a lot of factors such as the content volume, content format, access authentication, content workflow, user interfaces, and implementation of standards and so on upon which one needs to dwell on and carefully make a choice. Among the open source the most talked about are DSpace, Eprints, Fedora, and Greenstone.

6.3 Metadata

The main issue regarding metadata is the schema and the quantity of metadata the content needs to have. It is important to have a healthy mix of descriptive, structural, administrative and rights metadata to have a good indexing and storage system. Unqualified Dublin Core is the minimum metadata required for OAI interoperability. However, depending on the type of content in the repository, one may want to include other metadata sets.

6.4 Copyright and Content Licensing

The major concern, while depositing content in IR, is the copyright and the licensing issue. The authors and the IR are concerned that whether or

not their publisher's copyright policies will allow it. The checking of publisher copyright polices in order to establish whether or not articles can be added to the repository is one of the most tedious jobs. A ready reference about publisher's copyright policies is the list developed by the RoMEO (Rights Metadata for Open Archiving, Project maintained by the SHERPA (Securing a Hybrid Environment for Research Preservation and Access) Project-a Joint Information Systems Committee funded project at the University of Loughborough to investigate the rights issues surrounding the self-archiving of research in the UK under the Open Archive Initiative Protocol for Metadata Harvesting (OAI-PMH). Through surveying the academic community, it ascertained how give-away research literature and metadata was used and how it should be protected. From this work, the RoMEO Project created a list of publisher's conditions for self-archiving. SHERPA maintains the SHERPA/RoMEO listing, which details the rights given to authors by the major publishers of peer-reviewed academic journals. It is now possible to search for many publishers and find out what permissions they normally give as part of copyright transfer agreement. The majority of publishers support the rights of academic authors to make available their work online. However, some see repositories as a threat and prohibit authors from depositing their work by virtue of the copyright transfer agreement, which they ask the author to sign. This makes it difficult or impossible to populate the repositories with content. According to current data, around 71 per cent of the 297 publishers on the RoMEO list formally allow some form of self-archiving. The archiving policy varies from publisher to publisher like green publishers allow both pre- and post-print archiving; blue publishers allow post-print (i.e. final draft after refereeing) archiving; yellow publishers allow preprint (i.e., before refereeing) archiving; and white publishers do not support archiving formally. Digital content available freely cannot be considered as OA content, because the copyright owner might not have given consent for the types of permissive uses outlined by the BOAI. In the same way, the lack of a copyright statement does not imply that a digital document is in the public domain. The user should assume that the document is under full copyright until a thorough check of the copyright status of the work has been conducted. If a free digital document does not have a license or special copyright statement that specifically grants additional rights, the user's rights are limited by standard copyright provisions, the most relevant right being fair use.

The above implies content licensing because OA and free access are not synonyms (a license

is used for explicitly granting rights by the copyright owner to the users of content). For example, an ejournal may be freely available, but if its articles are also not available with minimal use restrictions (e.g., proper author attribution), it cannot be termed as an OA journal. OA journals typically use the Creative Commons Attribution (CCA) license. The CCA initiative provides creators with a series of 11 licenses under which creators may make their OA work available. For example the CCA license allows anyone to make derivatives and to make commercial use of the material without permission. This means that a commercial publisher can republish material from an OA publisher without permission or payment of fees.

Although e-prints in IRs are freely available, they do not have consistent copyright notice or license practices, and generally have:

- ℵ No copyright statement.
- ✗ A copyright statement modified by specific use provisions.
- ✗ Liberal use permitted for noncommercial purposes. ▮
- ✗ A CCA or other license, which may or may not permit commercial use or derivatives.
- ✗ Another local variation⁹.

The IR implementers need to deposit content with proper license agreements to protect the author's rights and at the same time make the content more widely accessible. They can choose to write their own license agreement or use the CCA, as long as they embody the OA principles. They also need to offer information on the standard CCA licenses to the depositor and should encourage depositors who retain their copyright to use licenses like the CCA.

7. CONCLUSION

The copyright of research articles generally is vested with the authors and is often transferred to the publisher, drastically sinking the scope of reuse of the research material in other contexts by the author and other users. OA and the establishment of an IR have emerged as plausible negotiation platforms with publishers over the rights to publish and disseminate research in a wider manner.

Author awareness regarding copyright is minimal and stress needs to be put on copyright awareness to prevent the 'gifting' syndrome by making copyright

Institutions keep control over how their work is accessed, used and re-used, by ensuring recognition and preservation of author's rights. Copyright is a pivotal issue in the acceptance of an IR service. The author/submitter must go through the copyright policies of the publisher, which vary from publisher to publisher. Authors should also be convinced that they are not losing their copyright by depositing their work into the repository. The key issue for IR is to ensure that they do not violate or infringe copyright or other IPRs. Project RoMEO's list of publisher policies is one such tool to prevent this. Content licensing is also one of the areas where active interest from IR implementers and authors has to be put in to generate more user-friendly copyright licenses and remove unnecessary restrictions.

One of the methods to increase deposition in IR is to increase copyright awareness and making deposition mandatory. To ensure initial content for the IR in order to encourage more deposits, implementers can identify the 'green' publishers and then ask the authors who have published in those journals for permission to deposit their papers in the institution's IR.

Copyright laws are meant to protect the author's basic rights and help in advancement of knowledge and research through rewards to the creators. Rights protection is impeding the access and use of digital information and is negating the objective of copyright law. These are not supposed to stranglehold the free flow of information. Nothing can be starker than the present situation, where the institutions and authors have to buy back their own published research, which they themselves had gifted freely, from monopolistic publishers at an exorbitant price. Embracing OA with open arms by content generators is the golden chance to break the shackles on knowledge. All government-funded research works needs to be selfarchived and put under minimum restrictive licenses to maximise their use and re-use by the society at large.

REFERENCES

- Madhavan, Mahesh. Intellectual property rights: An overview. JISC Legal Report, 2006. http:// www.jisclegal.ac.uk/ipr/ IntellectualProperty.htm.
- 2. Moorthy, A.L. & Karisidappa, C.R. Intellectual property rights, and copyright issues in the context of electronic information. *In* Information technology and applications in libraries: a textbook

for beginners, edited by M. Mahapatra & D.B. Ramesh, 2004. pp. 583-89.

- 3. Budapest open access initiative, 2002. http:// www.soros.org/openaccess/read.shtml.
- Hoorn, Esther. Repositories, copyright and creative commons for scholarly communication. *Ariadne*, 2005, 45. http://www.ariadne.ac.uk/issue45/hoorn/
- Hoorn, E. & Van der Graaf, M. Towards good practices of copyright in open access journals. http://www.surf.nl/en/publications/index2.php?oid=50.
- 6. Suber, Peter. Open access overview: Focusing on open access to peer-reviewed research articles

and their preprints. http://www.earlham.edu/~peters/ fos/overview.htm

- Ware, Mark. Pathfinder Research on Web-based Repositories. Publisher and Library/Learning Solutions, London, pp.3. http://www.palsgroup. org.uk/palsweb/palsweb.nsf/0/8c43ce800a9c67cd 80256e 370051e88a?OpenDocument
- Harnad, Steven & Brody, Tim. Comparing the impact of open access vs non-OA articles in the same journals. D-Lib,10(6). http://www.dlib.org/ dlib/june04/harnard/06harnard.html
- 9. Charles W. Bailey, Jr. What is open access?http://www.digital-scholarship.com/cwb/WhatIsOA.htm

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