



Copyleft and Copyright: Towards Understanding Digital Era Open Licenses

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Abstract

Noting the absence of non-traditional intellectual property rights such as the copyleft and open-source software licences in the curriculum of library schools in developing countries like Nigeria coupled with dearth of conversations on the subjects in professional practice, the paper uses the research note approach to contribute conceptual understanding of the subjects. This becomes more important given the gravitation of the production and use of intellectual artefacts in digital formats in an increasingly digital world. There has never been a time for stakeholders to understand the licences such as the creative commons and copyleft that govern digital intellectual artefacts than now. The paper concludes that the digital age and its many innovations have not come to disrupt a long intellectual property rights but to essentially, offer complementary dimensions and create innovative ways for implementing the rights while at the same time not obstructive to users' dynamic capabilities with digital intellectual properties. In order to better comprehend copyrights in the digital era of open licenses, the paper recommends that relevant stakeholders take an interest in this area of information policy. Also, that library schools in Nigeria and the rest of developing nations should include the concepts of open licences in their curriculum. Additionally, in keeping with best practices around the world, libraries should establish specialized units for copyright and digital scholarship.

Keywords: Copyleft, Copyright, Intellectual property rights, digital era, Creative commons, Open-source software

Introduction

Intellectual property right is a thematic area within the broader information policy subject. Information policy generally refers to “laws, regulations, and doctrinal positions – and other decision making and practices with society-wide constitutive effects – involving information creation, processing, flows, access, and use (Braman, 2011, p. 3). Information policy, according to Weingarten (1989) in (Ugocha et al., 2020) defines as a law, regulation or policy that encourages, or regulates the creation, use, storage, access, communication and dissemination of information. Thus, information policy regulates the flow of information from the creator or owner to the users determining the conditions of use, access, storage, distribution, disposal and every other thing that has to do with the information.

Besides, information policy, when viewed from a wider perspective of the society where it manifests as the enabler of political pursuits, public conversations and making decision, is a highly rated policy with strategic value to the government, governance and governmentalities of countries (Braman, 2006). Therefore, information policy must be critically dissected along formal and informal decisions, the processes of making them both by entities of government and private/public sector and also “the cultural habits and predispositions of governmentality that sustain and enable both governance and government” (Braman, 2006). Information policy is also captured in the application of societal mechanisms and their effects on the society (Rowlands, 1996). As can be observed from the foregoing, information policy is critical and has many parts as it relates to information flow, an important aspect of which is intellectual property right.

With the above background, intellectual property (IP) rights is clearly one of the core components of information policy when governance and governmentality as well as government are included in the mix (Braman, 2011). Others are: Literacy, Privatization and distribution of government information, Freedom of information access, Protection of personal interest, Retention and archival copies of material and Citizens charter of information rights (Ugocha et al., 2020). Therefore, by definition, IP rights “are the rights awarded by society to individuals or organisations principally over creative works: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce. They give the creator the right to prevent others from making unauthorized use of the property for a limited period” (Barton et al., 2002, p. 12). IP rights are broadly divided into four parts, which are patents, trademarks, copyrights, and trade secrets (Barton et al., 2002). However, the most applicable to this paper is copyright.

Copyright

Copyright is a collection of exclusive rights naturally held by creators of an original work of authorship like a literary or scientific work, song, movie or software (Barton et al., 2002; Copyright Alliance, 2022). These rights include the right to reproduce the work, prepare derivative works, distribute copies, and perform as well as display the work publicly” (Copyright Alliance, 2022). Copyright could also be defined as the “law that restricts the right to use, modify, and share creative works without the permission of the copyright holder” (Goldstein, 2021). Furthermore, copyright, unlike other IP rights such as the industrial property, “relates to literary and artistic creations, such as books, music, paintings and sculptures, films and technology-based works (such as computer programs and electronic databases)” (WIPO, 2016, p. 4).

Three basic requirements to be fulfilled by a work to be eligible for copyright protection are its originality, being a work of authorship and of course expressed in a tangible form (Copyright Alliance, 2022). To this end, WIPO affirmed that the protection guaranteed by copyright law is not to the creator’s ideas, which is captured as ‘patent’, but the physical form in which the idea is expressed. This helps fulfill the goals of copyright which are: to promote creativity and innovation as means to social and economic development and; to grant statutory expression to the rights of creators in their creations and innovations while maintaining balance against the interests of the public in accessing such works (WIPO, 2016).

The rights guaranteed for creators and innovators are two: economic rights which enables them to make financial derivatives from their works and moral rights which prevents distorted reproduction of the works either by the author or any other person. While moral right lasts forever and not transferable, economic right is limited by time, usually the life of the creator and not earlier than 50 years after his/her death and it is transferable. A work that is not protected by copyright is said to be in public domains. It should be noted that copyright laws are made by different countries and differ from country to country albeit slightly yet they usually conform to global treaties on copyright or intellectual property the countries are parties to. The foremost treaties on IP are the Paris Convention for the Protection of Industrial Property (1883) known as the Paris Convention and the Berne Convention for the Protection of Literary and Artistic Works (1886)- the Berne Convention (WIPO, 2016).

Intellectual property rights continue to be expanded in the wake of current realities by successive treaties. This conforms with the assertion in Braman that “the legal environment for

information and communication has thus been under constant reconsideration ever since it was recognized as fundamental to the new forms of democratic governance of the late eighteenth century” (Braman, 2006, p. 2). The World Intellectual Property Organisation (WIPO) is the coordinating agency of the United Nations for IP. The recent extension of the copyright was the treaty known as “the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled (Marrakesh Treaty)” adopted in June 2013 by WIPO member countries (WIPO, 2016, p. 18).

Notwithstanding, copyright still has some inherent limitations especially in the era of open networked digital information contents regarded as Open Content (Kreutzer, 2014). Although, some aspects of digital works have been covered yet there are still issues enforcing copyright in the digital era. Coverage is, in fact, not a challenge for copyright as much as the characteristics of digital works as well as the ethos of Open content (Kreutzer, 2014; Szczepańska, 2004) and the changing dynamics of how creators and users handle digital information. In this kind of digital technologies-saturated environment, the roles of users have become more dynamic such that a user is seen as a “a potential consumer, producer, creator and distributor of creative work” (WIPO, n.d., p. 1).

Relatedly, referring to “the IFLA Position on Copyright in the Digital Environment”, Szczepańska reported IFLA’s emphasis on the important roles played by libraries as institutions that strike a balance between the rights of creators and access needs of users while ensuring compliance with copyright laws. Noting that the environment, digital or print, does not matter, IFLA made far-reaching resolutions on copyright in the digital era primarily centered around the revision of national copyright laws to, where necessary, “ensure that permitted uses apply equally to information in electronic form and information in print” (Szczepańska, 2004, p. 7).

While copyright is restrictive and aims to guarantee economic remuneration to creators although with some exemptions for free use of works, the motivation for open content in the digital networked environment are massive production and free access to information with authors and creators enjoying permissive rights. Relatedly, the Open Access (OA) Movement, an aspect of the open content concept devoted to research information and communication, with the aim that all published scholarly information are made immediately accessible to readers without the barriers of money, technology or legislation, seems to be at odds with the right of authors over their work as guaranteed by the copyright. In fact, copyright has been reported to be a major restrictive concern for authors who wished to participate in the OA (Kim, 2008; Wesolek et al., 2015). While OA is not at variance with copyright (BOAI, n.d.), many

of the works OA proponents want authors to make Open are out of the control of the authors who at the time of publication had ceded copyright control to publishers.

The Open content proponents, as a response to address this issue, proposed alternate legal frameworks of equal intent as copyright but with different *modus operandi*. This approach is called licensing which was originally provided for in copyright laws but with a different approach of operation. Under the traditional copyright law, licence must be granted in writing by the copyright holder who in most cases would have charged a fee (WIPO, 2016). The rising recognition of the value of collaborative work and the new capabilities of the users of creative works in the open networked digital environment has paved the way for the development of new licensing practices (WIPO, n.d.). As a matter of fact, these licences are not out to replace existing copyright laws or repudiate their practices but to create a way of enforcing them in the context of digital realities.

The new licences, according to WIPO, “rather than representing renunciation or abandonment of copyright are actually new ways of exercising the rights provided under copyright and a form of distribution that relies upon the copyright owner’s exclusive rights” (WIPO, n.d., p. 1). The most commonly used licences are the Free and Open Source Software (FOSS) for software and digital platforms, and Creative Common (CC) Licences for published works of authorship such as books, articles, musical lyrics, videos and lots more. The rest of this paper will thus enunciate on the creative common licences with brief touch on its history and how they are being used for open contents. It will also elaborate on the Copyleft concept for software and related communication technologies. Before then, it is considered that a brief description of the features of digital information and open systems to which these licences and copyright apply be made.

Characteristics of Digital Information and Open Systems

It should be noted that the digital era has brought continuing change to the way information artefacts are produced and used. Besides being digital in nature, information and technology for communication continue to pitch with the Open content ideology and emerge as open systems with peculiar features. Open systems are those that use the open source software for their development. One salient characteristic of open systems is the disclosure of source code under licences that allow users to “use, inspect, modify, and distribute modified and unmodified software to others” (von Krogh & Spaeth, 2007). Additionally, open systems are

portable and interoperable, thus making them suitable for use in diverse environments and function with other systems.

Relatedly, digital information are characteristically rapidly duplicated, easily distributed, stored in numerous places with diverse degrees of discoverability, instantaneously created and shared (Ministry of Education- New Zealand, n.d.). With all these, it is pertinent that new approaches would be required to adequately protect the rights of creators and users of information artefacts and communication technologies. Moreover, they will also help in striking the right equilibrium among the goals of intellectual property right in one hand, the greater good of the society and of course the evolving modern realities of the digital era. Such steps include far-reaching undertakings such as licensing and development of copyleft which is a form of adaptation of copyright for the open software artefacts and other open content whose creator desires to be shared with or without modification under the original licence on which the work was created.

The Licences: Creative Commons and Open Source Software Licences

The licences commonly used today cover two broad aspects of digital intellectual property. The first one is the Creative Commons (CC) for digital creative works that are not software or databases, and thus relates to works that naturally falls under copyright regulations. The second has to do with Open Source Software (OSS) or Free and Open Source Software (FOSS) which uses the copyleft concept to protect software, databases and other related digital creation. Both licence frameworks allow for economic derivation for creators and inventors but are essentially public licences that permit licensees to distribute, reproduce, modify, use, make publicly available a work for non-commercial and commercial purposes (Kreutzer, 2014).





The Creative Commons (CC) Licences

Historically, according to Kreutzer (2014) the CC is the creation of a Harvard Law School legal scholar, Lawrence Lessig, who is reputed for starting the “open content movement”. With the aim of promoting digital commons, Lessig with two other American scholars, Hal Abelson and Eric Eldred founded the Creative Commons initiative in 2001. With CC, they wanted to give encouragement and enabling platform for creators to open their works for the use of the public while freeing them of the burden of expensive and somewhat difficult legal service and relief from the bothering consideration of giving their work to public domain (Kreutzer, 2014).

CC is believed to serve several benefits some of which Kreutzer highlighted as follows: allows for wide distribution of works; enhancement of “legal transparency and certainty” for holders of copyright and users of created works while also simplifying the legal deals between right of owners and users. Unlike the complex copyright law, CC licences clearly spell out what users can do with any work bearing the licence without having to read lengthy bogus legal documents and decipher legal jargons. Furthermore, the ‘false’ retention of rights in the digital era which in reality is not so, is duly addressed by the CC as it gives creators the opportunity to freely give up control of their work, yet under some legal frameworks.

The CC is nearly synonymous with the Open Content licensing model owing to its popularity and widespread use. The CC licence is composed of four fundamental attributes offered as six different licence types. Each of the CC licence types contains at least one or a combination of more than one licence attributes. These attributes or licence elements or features are as denoted and described: *BY* meaning Attribution, is the duty to acknowledge authors and responsibilities of a work; *NC* meaning NonCommercial implies the licence does not grant commercial use; *ND* which stands for NoDerivatives implies that sharable copies of the work can only be done verbatim, and *SA* which means ShareAlike allows for the modification of the work publishable under the licence of the original work or fitting licence (Kreutzer, 2014). These elements are further explained with their emblems in Table 1 below as detailed in Creative Commons (2022).








Table 1: The Four Elements of the CC Licences

s/n	Element	Emblem	Meaning
1	BY- Attribution		Credit must be given to the creator
2	SA- ShareAlike		Adaptations must be shared under the same terms
3	NC- NonCommercial		Only noncommercial uses of the work are permitted
4	ND- NoDerivatives		No derivatives or adaptations of the work are permitted

Source: (Creative Commons, 2022)

Accordingly, Creative Commons (2022) itemized the six different licence types which are shown in tabular form in Table 2 below, listed in descending order of permissiveness i.e., from most to least permissive licence. The Table also contains the Creative Commons public domain dedication (*).

Table 2: Six CC Licences and the CC Public Domain Dedication

s/n	Licence and their elements	Licence Emblem	Licence Terms
1	CC BY		Allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator. The license allows for commercial use.
2	CC BY-SA		Allows reusers to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator. The license allows for commercial use. If you remix, adapt, or build upon the material, you must license the modified material under identical terms.
3	CC BY-NC		This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format for noncommercial purposes only, and only so long as attribution is given to the creator.
4	CC BY-NC-SA		This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format for noncommercial purposes only, and only so long as attribution is given to the creator. If you remix, adapt, or build upon the material, you must license the modified material under identical terms.
5	CC BY-ND		This license allows reusers to copy and distribute the material in any medium or format in unadapted form only, and only so long as attribution is given to the creator. The license allows for commercial use.
6	CC BY-NC-ND		This license allows reusers to copy and distribute the material in any medium or format in unadapted form only, for noncommercial purposes only, and only so long as attribution is given to the creator.
*	CC0		This is a public dedication tool, which allows creators to give up their copyright and put their works into the worldwide public domain. CC0 allows reusers to distribute,

			remix, adapt, and build upon the material in any medium or format, with no conditions.
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Source: (Creative Commons, 2022)

Open-Source Licences (Copyleft)

Open source (OS) licences “are legal and binding contracts between the author and the user of a software component, declaring that the software can be used in commercial applications under specified conditions” (Goldstein, 2021). OS licences are not limited to OSS only but also to mixed platforms. Open source licences have been found to be useful in mixed software products that combine open source with proprietary codes which are thought to be beneficial in the development of products and good quality solutions at reduced costs and period of development (WIPO, n.d.). Whereas open implies free and publicly available to anyone but without an OS licence, a software, even if its source codes are publicly available on GitHub, is not an OSS and the rights of its creators would be violated if used in that manner (Goldstein, 2021).

OS licences operate under two broad regimes, viz, copyleft and permissive licences (non-copyleft) (Goldstein, 2021). A further analysis shows that OS licences can be classified into three groups from the most restrictive to the least restrictive licences: strong-copyleft, weak-copyleft, and non-copyleft (Sen et al., 2008). Under these categories fall hundreds of open source licences used by OSS participants with the choice of which licence to use correlated to creators’ organizational policies or projects’ motives.

The Permissive Open-Source Licence also known as non-copyleft or colloquially as “Anything Goes” is a less restrictive licence that guarantees the freedom to use, modify, and redistribute, while also permitting proprietary derivative works. Permissive OS licence offers diverse levels of “freedom to use, modify, and redistribute open source code, permitting its use in proprietary derivative works, and requiring nearly nothing in return in regards to obligations moving forward” (Goldstein, 2021).

The Copyleft Open Source Licence also known as the “reciprocal license” implies that “anyone who redistributes the software, with or without changes, must pass along the freedom to further copy and change it” (GNU Project- Free Software Foundation, 2022). In other words, “other developers have the right to use, modify, and share the work so long the reciprocity obligation is maintained” (Goldstein, 2020). According to the proponents of the copyleft

licence, “copyleft guarantees that every user has freedom” (GNU Project- Free Software Foundation, 2022).

Historically, Richard Stallman, a software programmer at the Artificial Intelligence Lab at MIT in the 1970’s and early 1980’s was credited to be the founding father of free and open source software (Bretthauer, 2001) and the founder of the Free Software Foundation. After enjoying years of free and open software development at his lab, Stallman was faced with the challenge of proprietary software and became a victim of “non-disclosure agreement” that stopped him from further improving source codes of systems in his lab which led to his resignation to start the development of the GNU. GNU is a foremost free and open operating system. Stallman’s motivation was for software to be free, in the sense of freedom and not price. Free software, according to Bretthauer (2001), was defined by Stallman to have “four essential freedoms:

- i. You have the freedom to run the program, for any purpose.
- ii. You have the freedom to modify the program to suit your needs. (To make this freedom effective in practice, you must have access to the source code, since making changes in a program without having the source code is exceedingly difficult.)
- iii. You have the freedom to redistribute copies, either gratis or for a fee.
- iv. You have the freedom to distribute modified versions of the program, so that the community can benefit from your improvements.”

While noting that, the appropriate approach to make software free and open would have been to put it in public domain, Stallman feared some “middlemen” may make profit out of it and still denied others the freedom they enjoyed. He developed some set of licences to regulate the use of the GNU and thus called it the GNU General Public Licence (GNU GPL), which today is the most popular FOSS licence (Bretthauer, 2001; GNU Project- Free Software Foundation, 2022; Goldstein, 2021).

The GNU GPL is a copyleft licence. According to its proponents, “to copyleft a program, we first state that it is copyrighted; then we add distribution terms, which are a legal instrument that gives everyone the rights to use, modify, and redistribute the program's code, or any program derived from it, but only if the distribution terms are unchanged” (GNU Project- Free Software Foundation, 2022). To them, “the code and the freedoms” are conjoined legal entities that are not separable. They further averred that copyleft is not an antithesis of copyright but copyright used in a way dissimilar to how proprietary software developers use it to take away the freedom of users. Accordingly, through copyleft, “we use copyright to guarantee their

freedom. That's why we reverse the name, changing 'copyright' into 'copyleft'" (GNU Project-Free Software Foundation, 2022). The GPL has evolved from its initial draft in 1984 through the second version in 1991 to its current form, third version, to reflect the changing dynamics of software development.

Other examples of FOSS licences are: Apache Licence, Microsoft Public Licence, Berkeley Software Distribution (BSD) licence, Common Development and Distribution Licence (CDDL), Eclipse Public Licence (EPL), MIT Licence among hundreds of others (Goldstein, 2021).

Conclusion and Recommendations

Apparently, the digital age and its many innovations have not come to disrupt a long intellectual property rights, but to essentially offer complementary dimensions and create innovative ways for implementing the rights. In fact, they are not also obstructive to users' dynamic capabilities with digital intellectual properties. Even though the digital environment provides the basis for genuine quest for free or open information and software, yet it offers tremendous opportunities for the enforcement of the rights of creators that existing intellectual property legal frameworks and treaties provided for. Still, it provided room for the broadening of the frameworks in relation to the characteristics of digital creative works and technologies.

To this end, though more permissive than the restrictive mode in traditional licensing regime, the open licences are there to equally help creators make economic gains. They have, to a great extent, facilitated the exponential growth of knowledge ditto the enhancement of the achievement of the greater good for all. The FOSS has been particularly helpful in this regard as 60 – 80% of available softwares fall into this group, thus helping projects in the technological sector to become more expansible, sustainable, complementary and collaborative. In the same vein, the CC is helping to expand and enhance the gravitation towards Open as default for scholarly outputs and other works of authorship. Open-minded creators and users of information and software no doubt have the necessary legal frameworks in support of their works and ideologies to serve the general good of the society.

It is thus recommended that relevant stakeholders such as librarians, LIS researchers and students should take interest in this aspect of information policy to deepen their understanding of the copyrights and its dynamics in the digital era of open licences. Educative outreach

services and events could be organized to help intending creators and users of information know what supports are there for their works. Academic librarians could set up special unit for copyright and digital scholarship while their counterparts in the public libraries could partner with national agencies and organisations for intellectual property rights for the education of the public on the subject. Efforts should be made by library and information science educators to expand the curriculum of copyrights courses to include open licences for the understanding of students and practitioners of LIS profession in Nigeria and rest of Africa.

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