

Beyond the Marrakesh VIP Treaty: Typology of copyright access-enabling provisions for persons with disabilities

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Abstract

This paper builds upon the evidence drawn from a scoping study on access to copyright works by persons with disabilities. It identifies and discusses specific access-enabling technologies for persons with aural, cognitive, physical, and visual disabilities and how they are affected by the exercise of exclusive rights. It shows how, and the extent to which states' ratification of the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled (Marrakesh Treaty) has enabled the making of accessible format of copyright works for persons with disabilities. To this end, the paper examines patterns and trends of accessible format-enabling provisions in the copyright laws of World Intellectual Property Organization (WIPO) member states.

KEYWORDS

access, copyright, disabilities, key topics, limitations and exceptions

1 | INTRODUCTION

One of the most-often cited statistical accounts of the global prevalence of disability is the World Health Organization (WHO) and World Bank's 2011 *World Report on Disability* which indicated that "one billion people in the world live with some form of disability, of whom nearly 200 million experience considerable difficulties in functioning"

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(WHO & World Bank, 2011, p. xi). More recent statistical surveys have confirmed this prevalence (Groce, 2018; WHO, 2018). Based on these numbers, the global prevalence of disability currently stands at approximately 15% of the global population. WHO and the World Bank report that the majority of persons with disabilities reside in the developing world (WHO & World Bank, 2011; World Bank, 2018). This constituency faces several challenges and is among the “most marginalized groups in the world” (WHO, 2018b). This paper considers such disadvantage within the context of access to, and use of, copyright-protected works. The crux of the matter is that some modification or remediation of copyright-protected works would be required to render the work accessible to persons with disabilities. In the absence of an applicable limitation and exception (L&E), such modification would have to be in terms of a license granted by the copyright holder. While licensing is a viable option, it cannot be the sole solution, particularly where binding human rights norms require states to ensure equitable access to copyright-protected works. Specifically, the United Nations Convention on the Rights of Persons with Disabilities (CRPD; United Nations, 2007) requires state parties to ensure, in line with international law, that their intellectual property (IP) legislation does not “constitute unreasonable or discriminatory barrier to access by persons with disabilities” (CRPD, Article 30(3)). A consideration of the appropriate L&Es for persons with disabilities, therefore, lies at the intersection of human rights and IP law and requires the advancement of human rights using copyright’s legal and policy mechanisms (Helfer, Land, Okediji, & Reichman, 2017, p. 1).

The Standing Committee on Copyright and Related Rights (SCCR) of the World Intellectual Property Organization (WIPO) has had disability-related L&E on its agenda since 2003, with Chile tabling the first proposal in 2005 (SCCR/13/5) and a subsequent proposal by Brazil, Chile, Nicaragua, and Uruguay for the formal adoption of a work plan in 2008 (WIPO–SCCR, 2008a, 2009, SCCR/16/3). The latter proposal moved for the adoption of a work plan that included “achieving a consensus on minimum mandatory exceptions and limitations particularly with regard to educational activities, people with disabilities, libraries and archives, as well as exceptions that foster technological innovation” (WIPO–SCCR, 2008b, SCCR/16/2). Thereafter, the SCCR resolved to start “dealing, without delay and with appropriate deliberation, with those needs of the blind, visually impaired, and other reading-disabled persons, including discussions at the national and international level on possible ways and means facilitating and enhancing access to protected works. This should include analysis of L&Es” (WIPO–SCCR, 2008c, SCCR/17/WWW [112533]). This study culminated in the adoption of the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired, or Otherwise Print Disabled (Marrakesh Treaty) in WIPO (2013). Further background on the Marrakesh Treaty, an overview of its key legal and policy innovations, and its relationship to international human rights are given in Section 4. This treaty, as is evident from its name, is intended to benefit blind persons and those with visual disabilities through its provision for copyright L&E which facilitate their access to print works. Early versions of the negotiating text included provisions that would have catered for other works and disabilities. Specifically, Article 15 of the Proposal by Brazil, Ecuador and Paraguay (SCCR/18/5) read:

- (a) For the purposes of this treaty, a “visually impaired” person is:*
a person who is blind; or
a person who has a visual impairment which cannot be improved by the use of corrective lenses to give visual function substantially equivalent to that of a person who has no visual impairment and so is unable to access any copyright work to substantially the same degree as a person without a disability.
(b) Contracting parties shall extend the provisions of this treaty to persons with any other disability who, due to that disability, need an accessible format of a type that could be made under Article 4 to access a copyright work to substantially the same degree as a person without a disability.

Article 15(b) was omitted from the final text and, consequently, a binding international normative framework does not exist for persons with other disabilities and for persons with visual disabilities in relation to other types of work, beyond text or print works.

The SCCR commenced deliberations for an international normative standard L&Es for persons with disabilities not covered by the Marrakesh Treaty and in 2013 prepared a *Provisional Working Document Towards An Appropriate*

International Legal Instrument (In Whatever Form) On Limitations And Exceptions For Educational, Teaching And Research Institutions And Persons With Other Disabilities Containing Comments And Textual Suggestions (SCCR/26/4PROV; SCCR/28/38). If efforts under this study plan are successful, international copyright law would then be properly aligned with the CRPD which requires the configuration of copyright law to eliminate any “unreasonable or discriminatory barrier to access by persons with disabilities” (CRPD, Article 30(3)).

So far, the diplomatic representations from WIPO member states at the SCCR show substantial understanding of the importance of L&Es for persons with other disabilities within national copyright laws. However, the issue remains what shape an international normative framework for L&Es for disabilities not covered by the Marrakesh Treaty would take and whether there is a need for such mechanism in the first place in view of the existence of other international treaties, such as the Berne Convention for the Protection of Literary and Artistic Works (WIPO, 1886), which spell out minimum standards for limiting copyright (WIPO–SCCR, 2013, 2014). To assist the SCCR in its deliberations, its Secretariat commissioned a scoping study on L&Es for persons with disabilities not covered by the Marrakesh Treaty (WIPO–SCCR, 2015, p. 99). The first report on the scoping study was presented at the 35th session of the SCCR (Reid & Ncube, 2017), with a revised version offered at the 38th session (Reid & Ncube, 2019). Thereafter, WIPO member states discussed the issues at the 39th session of the SCCR and their work is ongoing (SCCR/39/Summary by The Chair). This paper goes beyond the scoping study in three main ways. First, it includes a background section on Marrakesh Treaty which sets out its key legal and policy innovations and its relationship to international human rights. Second, drawing on trends and patterns of WIPO member states' legislative approaches, it considers the options for an international normative framework for disabilities that are not covered by the Marrakesh Treaty. Third, the paper presents and analyzes the findings of the scoping study in more depth beyond the strictures of the terms of reference of the scoping study.

This paper proceeds in six further sections. Its methodology is set out at Section 2. Section 3 highlights the copyright issues raised by accessibility technologies used for creating accessible format copies for persons with disabilities, with an emphasis on the role of artificial intelligence (AI) and machine learning. The paper then gives an overview of the Marrakesh Treaty's key legal and policy innovations and its relationship to international human rights in Section 4. Section 5 identifies and analyzes the patterns and trends adopted by WIPO member states in formulating L&Es for persons with disabilities. It considers Marrakesh Treaty required L&E and those catered for beyond the Marrakesh Treaty's obligations. Section 6 raises the options for an international normative framework for disabilities that are not covered by the Marrakesh Treaty and Section 7 concludes the paper.

2 | METHODOLOGY

The paper relies on data obtained from a mix of empirical and independent desk-based research. The empirical research was done between 2017 and 2019 by way of a questionnaire sent out to responsible officers in the relevant government agencies in member states. The questions in the questionnaires were structured in a manner that elicited answers showing the trends and patterns in relation to the access-enabling L&Es in the copyright regime of the member states. The independent desk-based research relied principally on WIPOLex to fill in the data gaps arising from the difficulty in getting feedback on the questionnaires from member states. The desk research also involved desk review of relevant case law and literature.

3 | PERSONS WITH DISABILITIES, COPYRIGHT, AND ACCESSIBILITY TECHNOLOGIES

From a medical point of view, each person living with disabilities faces several unique health challenges that hinder their capacity to participate fully in society (Rasmussen & Lewis, 2007). More broadly, however,

disability—according to the preamble of the CRPD—is an evolving concept, which “results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others” (United Nations, 2007).

From a copyright perspective, there are different categories of disability and the persons falling within the groups have peculiar challenges in relation to accessing protected works. The categories of disabilities include aural (deaf or hard of hearing), visual (blind, visually impaired or otherwise print disabled), cognitive and intellectual, physical or motor, and multiple disabilities (a combination of two or more of the foregoing impairments). Categorizing disabilities in this way is a useful framework for understanding the extent of transformation of materials required to ensure that different communities of disabled persons access diverse forms of copyright-protected contents.

3.1 | Categories of disabilities and accessibility technologies

Persons with aural disabilities are those unable to adequately perceive sound. As a result, works consisting of or containing aural elements may be inaccessible without the substitution or addition of transformations of the aural components into a visual, tactile, or other format. A common transformation for aural accessibility is the closed-captioning of audio-visual materials such as films and TV programs. The spoken dialog and other information about the audio contained in the material are transcribed into text that can then be embedded in or distributed alongside the audio-visual components. This allows the person with a disability to access the aural components of the program in an appropriate medium (ITU, 2011).

Also, persons with visual disabilities are unable to perceive works fixed in visual mediums and, therefore, are incapable of accessing some protected works that contain visual components. This includes print works such as books, audio-visual works such as movies and television, content on computers including websites and computer software, and pictorial, graphical, or sculptural works. These works must be at least partially transformed into a medium that is not dependent on visual information. For the blind or visually impaired, the transformation converts the information into auditory or tactile mediums. Information conveyed visually, such as the picture in a movie, must be transformed into an audio description of the image or a tactile description such as braille, or 3D-printed objects, in order for the person with the visual disability to successfully perceive the content (Jafri & Ali, 2015; Schreier, Levanthal, & Uslan, 1991; Williamson, Wright, Schauder, & Bow, 2001).

Furthermore, cognitive disabilities cover a wide range of disabilities that affect the mental processes of a person. This includes genetic disabilities such as Down syndrome and autism, learning disabilities like dyslexia, brain injuries from illness or trauma, and dementia. These disabilities, while related in their cognitive bases, manifest differently and therefore require a range of transformations to adapt protected content for people with this type of disability. Most common cognitive disabilities express as difficulty in processing complex information, requiring a transformation of material into more easily understood forms (Borg, Lantz, & Gulliksen, 2015; Giannoumi, Land, Beyene, & Blanck, 2017; Thordardottir, Fange, Lethin, Gatta, & Chiati, 2019). Due to the wide variety of causes and special needs, persons with cognitive disabilities require a range of transformations, such as plain and simple language versions of written and audio works, changes in formatting, and text-to-speech technology, which helps people with dyslexia to access print content (McCormick, 2002). Because these disorders affect the processing and perception of a variety of information mediums, the necessary transformations may convert every type of copyright-protected work mentioned above.

That being said, persons with physical disabilities may face difficulties in interacting with different formats. For example, someone with limited motor ability may not be able to turn the pages of a book, and therefore be unable to read print media without assistance. While there are assistive technologies like automatic page turners, they may or may not work well for a person depending on the specifics of his or her disability (Stewart, McIntire, Tilson, & Meserve, 2014). Transforming a print work into an audio work instead may provide greater ease of access. While

many physical disabilities may be covered by the provisions of the Marrakesh Treaty, people with physical disabilities may face other barriers in accessing copyrighted works on their computers and require transformations of software to function on alternate inputs such as voice commands or devices like trackballs or switches to access computer-based content such as webpages or video games. Computer software ideally is designed to function with a diverse range of alternate inputs but if software is not accessible by default, modifications may be required to allow alternate inputs to interoperate with the software in question (Laabidi, Jemni, Ayed, Brahim, & Jemaa, 2014; Skejić & Durek, 2007).

Finally, persons with multiple disabilities will face challenges to accessing a variety of protected works. As such, they require transformation of all facets of protected works into a medium that they can perceive. For example, people who are both blind and deaf are unable to access audio and visual materials and require transformations of audio-visual works into tactile formats such as Braille. A person who has both cognitive and aural disabilities may require both captions and plain and simple language transformation of those captions to access aural content (ITU, 2011).

3.2 | Implications of accessibility technologies for copyright

The accessibility technologies discussed above are important in ensuring that individuals with disabilities participate effectively in education, entertainment, and other relevant activities in the society, but the economics surrounding efforts to make copyrighted works accessible are complex. Remediating certain types of copyrighted works into accessible formats is often labor- and cost-intensive. The differences between video and text, and differences between aural, visual, and cognitive disabilities means that remediation on a small, individual scale may not be a sustainable way to achieve the goal of wide access to copyrighted works.

As such, an increasingly important factor in accessibility technology is the rise of AI and machine learning. Machine learning, for instance, has the potential to facilitate technologies that could make text easier to understand for persons with cognitive disabilities by producing more comprehensible versions of text automatically, without the use of human editors. Researchers at IBM are working on a language-processing software that would replace figures of speech such as “raining cats and dogs” with plainer terms such as “raining hard,” and trim or break up long sentences with multiple clauses and indirect language (Simonite, 2017). Google has also used machine learning to develop its Cloud Vision API, which uses neural networks to classify images and extract textual information for those who experience visual impairment (Chidzik, 2018).

Machine learning already in use, like Amazon Alexa or Google Home, also has the potential to be extended to assist individuals with speech and language disabilities (Lewis, 2018). These technologies, called artificial cognitive assistants, could one day be utilized as part of a remote caregiver service that could alert hospitals and nurses when someone shows signs of danger or distress (Lewis, 2018). Accessibility technologies enabled by machine learning can overcome the inefficiencies in individual remediation by automating otherwise costly accessibility efforts and enabling the ability to remediate works at scale. The use of machine learning is thus an important tool in fulfilling the goal of broader access to materials by persons with disabilities.

Beyond the question of cost and labor intensiveness, the accessibility technologies require, first and foremost, an enabling legal framework, especially as deploying them to transform content for easy access for persons with disabilities may implicate copyright and related rights. This is so because, subject to a specific national regime, copyright law generally protects certain categories of original works, including literary, musical, dramatic, cinematographic works, broadcast, and sound recordings. The copyright holders are conferred with certain exclusive rights to the protected works, which include reproduction, adaptation, distribution, broadcasting, communication, importation, and exportation rights and the right to enforce technological protection measures over their digital contents, among others (Sullivan, 2017). Thus, unless where clearly restrained or limited, copyright holders are enabled to prevent third parties from exercising any of the rights enumerated above without due authorization.

However, the legal provisions aimed at restraining rights-holders from exercising their exclusive rights must permit the unauthorized use of their works only in certain special cases, which does not prejudice their legitimate interests and which does not conflict with the exploitation of the work (Berne Convention, Art 9.2).

The Marrakesh Treaty is an example of such legal framework aimed at limiting rights-holders' exclusive rights in favor of persons with disability. An in-depth analysis of the Marrakesh Treaty is beyond the scope of this paper (for that, see Helfer et al., 2017; Olwan, 2017; Trimble, 2014; van Wiele, 2014). However, as will be seen in Section 4, the Marrakesh Treaty's definitions of "works" (Article 2(a)) and "beneficiary person" (Article 3) limit its access enabling provisions to print- and text-based copyright works for persons with visual, physical, and sensory disabilities. As is apparent from the discussion so far, print- and text-based materials are only one segment of the cultural materials that persons with disabilities require access to for effective and equal participation in societal life. Persons who qualify as beneficiaries under the Marrakesh Treaty may still be prevented by their disabilities from accessing copyright-protected materials in other formats. In the same vein, copyright-protected works in the form of print and text will also be outside the reach of persons with other disabilities not covered by the Marrakesh Treaty.

4 | BACKGROUND: THE MARRAKESH TREATY AS A MODEL

Influenced by the CRPD, WIPO member states adopted the Marrakesh Treaty on June 28, 2013. The Marrakesh Treaty came into force on September 30, 2016, 3 months after 20 eligible parties had deposited their instruments of ratification or accession (Art 18). As of October 31, 2019, the Marrakesh Treaty has either been ratified or acceded by 61 member states (WIPO, 2019). For individual member states, the Marrakesh Treaty comes into force at the expiration of 3 months from the date on which the state deposited its instrument of ratification or accession (Art 19). The ratification or accession of the Marrakesh Treaty does not necessarily mean that it has become self-executing locally. This would depend on whether the country has a monist or dualist approach to the reception of treaties (de Wet, Hestermeyer, & Wolfrum, 2015, p. 3; Oppenheim, Jennings, & Watts, 1992, p. 53). Where a dualist approach is applicable, the provisions of the Marrakesh Treaty would have to be domesticated through an enactment in national law. For countries with a monist approach, the treaty becomes applicable locally upon coming into force.

Almost all WIPO member states have already enacted some form of a copyright regime that vests exclusive rights in the authors of creative works, which are archived on WIPOLex (<https://wipolex.wipo.int/en/main/legislation>), a searchable online repository of laws. Without relevant specific L&Es, the exercise of such exclusive rights can constitute both access and usage barriers and difficulties for persons with disabilities who wish to use copyrighted works. Therefore, creating accessible versions of copyright-protected works is necessary to ensure that persons with disabilities are able to fully participate in and contribute to the cultural life of their societies. Indeed, as new technologies, such as automatic speech recognition, begin to materialize (Busatlic, Dogru, Lera, & Sukic, 2017; Noyes & Frankish, 1992), there is great potential to increase access to copyrighted works by facilitating the accessibility of works at scale. However, creating and disseminating accessible forms of copyrighted work—for example, a captioned television program or audio version of a book—can present difficulty because doing so would implicate the exclusive rights protected by the copyright regimes in member states, such as the rights to reproduction and distribution.

4.1 | Overview of the Marrakesh Treaty's provisions

Article 3 of the CRPD lists eight principles, including nondiscrimination; full and effective participation and inclusion in society; equality of opportunity and accessibility. As already indicated, Article 30(3) enjoins state parties

to ensure that “intellectual property rights do not constitute an unreasonable or discriminatory barrier to access by persons with disabilities to cultural materials.” The Marrakesh Treaty recalls the CRPD principles in its principles and sets out to provide for a binding normative framework for compliance with Article 30(3) of the CRPD.

The Marrakesh Treaty adopts a coexistence approach to human rights which seeks to align IP rights and human rights norms in a way that allows both to achieve the common goals of protection of creative outputs and inventions, while simultaneously securing access (Helfer et al., 2017, pp. 6–7). It employs the public policy mechanism of L&E in terms of which accessible formats of works can be created without a license from the copyright holder for the benefit of “beneficiaries.” Article 3 defines a beneficiary as a person who

(a) is blind;

(b) has a visual impairment or a perceptual or reading disability which cannot be improved to give visual function substantially equivalent to that of a person who has no such impairment or disability and so is unable to read printed works to substantially the same degree as a person without an impairment or disability; or

(c) is otherwise unable, through physical disability, to hold or manipulate a book or to focus or move the eyes to the extent that would be normally acceptable for reading; regardless of any other disabilities.

The Marrakesh Treaty's main provisions relate to the L&Es that enable beneficiaries and persons acting on their behalf, including caregivers and authorized entities, to provide accessible formats of copyright-protected works for the benefit of beneficiaries. These works are limited to “literary and artistic works within the meaning of Article 2(1) of the Berne Convention for the Protection of Literary and Artistic Works, in the form of text, notation and/or related illustrations, whether published or otherwise made publicly available in any media” (Marrakesh Treaty Article 2(a)).

An accessible format copy is defined as “a copy of a work in an alternative manner or form which gives a beneficiary person access to the work, including to permit the person to have access as feasibly and comfortably as a person without visual impairment or other print disability. The accessible format copy is used exclusively by beneficiary persons and it must respect the integrity of the original work, taking due consideration of the changes needed to make the work accessible in the alternative format and of the accessibility needs of the beneficiary persons” (Marrakesh Treaty Article 2(b)).

An authorized entity is defined in Article 2(c) as:

an entity that is authorized or recognized by the government to provide education, instructional training, adaptive reading or information access to beneficiary persons on a nonprofit basis. It also includes a government institution or nonprofit organization that provides the same services to beneficiary persons as one of its primary activities or institutional obligations

This definition is to be broadly construed to include “educational institutions, libraries, healthcare organizations, civil society groups, and other governmental or nonprofit organizations” provided that serving beneficiary persons is one of its primary activities (Helfer et al., 2017, p. 28). The Marrakesh Treaty then provides in Article 4 for the mandatory L&E that state parties should enact in their domestic legislation. Such provisions should be “a limitation or exception to the right of reproduction, the right of distribution, and the right of making available to the public as provided by the WIPO Copyright Treaty (WCT), to facilitate the availability of works in accessible format copies for beneficiary persons” (Article 4(1) (a)). In addition to this compulsory provision, national laws may include L&Es “to the right of public performance to facilitate access to works for beneficiary person” (Article 4(1) (b)).

Article 4(2) then sets out the manner in which national legislation can implement the requirements of Article 4(1). Under this provision, authorized entities should be permitted to make an accessible format copy of a work, obtain copies of such works from another authorized entity, and distribute those copies to beneficiary persons and

authorized entities in other countries provided that four conditions are met (Helfer et al., 2017, p. 25, pp. 44–45). These conditions are that (a) all activities should be premised on lawful access to that work or a copy of that work; (b) the remediation of the work into an accessible format “does not introduce changes other than those needed to make the work accessible to the beneficiary person”; (c) resultant accessible format copies are for the exclusive use of beneficiary persons; and (d) “the activity is undertaken on a nonprofit basis.”

In relation to remediation by a beneficiary person, or someone acting on his or her behalf including a primary caretaker or caregiver, Article 4(2) provides that the only conditions to be met are that the accessible format copy made must be for the personal use of the beneficiary person who must have lawful access to that work or a copy of that work (Helfer et al., 2017, p. 45). Should a state party choose not to adopt the above modes of implementation, it is at liberty to craft its own L&E for instance “by relying on existing statutory exceptions to copyright, including doctrines such as fair use or fair dealing” (Article 4(3), Helfer et al., 2017, p. 46). Where this option is exercised, the L&E used must comply with Articles 10 and 11 and specifically the three-step test set out in Article 11. To wit, that the L&E “does not conflict with a normal exploitation of the work and does not unreasonably prejudice the legitimate interests of the author” as set out in Article 9(2) of the Berne Convention and Articles 10(1) and (2) of the WCT; or be confined to “certain special cases which do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the rights holder” as set out in Article 13 of the Agreement on Trade-Related Aspects of Intellectual Property Rights. Presumably, the model implementation provisions given in Article 4(2) meet the three-step test (Helfer et al., 2017, p. 46).

Article 4(4) provides that national laws may limit the L&E “to works which, in the particular accessible format, cannot be obtained commercially under reasonable terms for beneficiary persons in that market.” If this limitation is included in national laws, this has to be notified upon ratification of, acceptance of or accession to this treaty or at any time thereafter. As of October 31, 2019, only the following countries had made such notification: Argentina, Canada, and Japan. Finally, the question of whether the exercise of such L&E would be subject to remuneration is left to state parties to decide (Article 4(5)). It has been noted that the adoption of a remuneration requirement would present the twofold difficulty or risk of (a) complexity for beneficiaries and authorized entities and (b) a financial burden that would be disadvantageous for developing and least-developed countries and for poor individuals in wealthier countries (Helfer et al., 2017, p. 50). Therefore, where this requirement is in place, it would be important for care to be taken to ensure that these risks are eliminated or reduced.

One of the most important aspects of scaling the supply of accessible formats of works is the ability to share them across borders. Such sharing ensures that efficient distribution can occur. Consequently, export and import provisions are contained in Articles 5 and 6, respectively. Export is only permitted to a beneficiary person or authorized entity in a Marrakesh Treaty party state (Article 5(1)). Article 5(2) provides a model implementation clause that requires that export to be subject only to the conditions that it is distributed or made available for the exclusive use of beneficiary persons and “provided that before the distribution or making available the originating authorized entity did not know or have reasonable grounds to know that the accessible format copy would be used for other than beneficiary persons.” Party states are at liberty to craft their own export L&E provided that it meets the requirements of Articles 10 and 11 as well as Article 5(4) which imposes certain obligations on the receiving state if it is not bound by the three-step test in the Berne, namely that the accessible format copies be for the exclusive use of beneficiary persons in that country only. If the receiving party state is also a member of the WCT, then the accessible format copies can be exported to another Marrakesh Treaty party state (Helfer et al., 2017, p. 59). Importation of accessible format copies is permitted on the same terms set out under Article 4 (discussed above). In short, the same scheme extended to the making of accessible format copies under Article 4, should be extended to the importation of such copies. Article 9 requires state parties to cooperate “to foster the cross-border exchange of accessible format copies” through information sharing with the assistance of the International Bureau of WIPO.

Article 7 requires that party states should ensure that national provisions relating to the circumvention of Technological Protection Measures do not present a barrier to the enjoyment of L&E by beneficiary persons.

5 | THE TRENDS AND PATTERNS ON L&ES FOR PERSONS WITH DISABILITIES

This part focuses on the access-enabling provisions of WIPO's 192 member states, whether they have ratified or acceded the Marrakesh Treaty or not. This is because Marrakesh Treaty ratifications and accessions are increased substantially, for instance in the six period between September 1, 2019 and October 13, 2019 the following four notifications were received: Accession by the Republic of Trinidad and Tobago (No. 63) on October 4, 2019; Accession by New Zealand (No. 62) on October 4, 2019; Accession by the Bolivarian Republic of Venezuela (No. 61) on October 2, 2019; and Ratification by the Republic of Zimbabwe (No. 60) on September 12, 2019 (WIPO, 2019). Therefore, a focus on current Marrakesh contracting parties would soon become outdated. The goal of this section is to highlight and discuss the findings on the trends and patterns relating to disability L&Es provisions in the member states' national copyright and related legislation.

A full appendix containing individual state's legal provisions and a statistical summary of the findings have been published with the SCCR Study (Reid & Ncube, 2019). The trends and patterns of disability L&E provisions in all WIPO member states commented upon below are gleaned from this appendix and summary. States falling into all the identified categories will not be listed here as copyright reform is ongoing in several states and any such lists would soon become outdated. For purposes of this paper's discussion, it suffices to note that, the SCCR Study reported that, as of 30 March 2019:

- (a) One hundred and one WIPO member states did not have disability-related L&E in their copyright laws (52.6%).
- (b) Ninety-one WIPO member states had disability-related L&E in their copyright laws (47.4%).

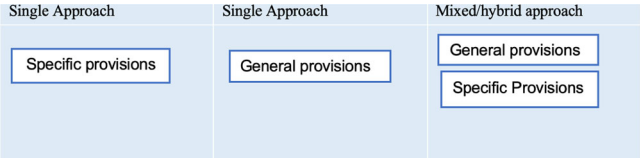
The correlation between being bound by the Marrakesh Treaty and the existence of disability-related L&E is notable in the following respects:

- (a) As already indicated, there are currently 61 WIPO member states that are party to the Marrakesh Treaty which means that 30 WIPO member states have disability-related L&E even though they are not obliged to do so by the Marrakesh Treaty (15.6% of WIPO members).
- (b) Among the states that do not have any disability provisions in their copyright laws, 38 are contracting parties to the Marrakesh Treaty (62.3% of Marrakesh Treaty contracting states do not have disability-related L&E).

Among the 91 member states that have disability-related L&E the following patterns are evident:

- (a) States employ either *specific* or *general* disability provisions. As illustrated in Figure 1, the specific or general disability L&E provisions are used in a *single* or *mixed/hybrid* approach. These approaches are discussed in detail in Sections 5.1. and 5.2.
- (b) The main variances relating to the disabilities and works provided for, can be summarized as follows:
 - (i) Among the WIPO member states that have enacted disability L&Es in their domestic laws, some follow the Marrakesh Treaty style in the sense that they provide principally for blindness, visually impairment, print and reading disabilities, limited to print or text works.

FIGURE 1 Approaches to disability limitations and exceptions in national copyright legislation. Source: Reid and Ncube (2019) [Color figure can be viewed at wileyonlinelibrary.com]



- (ii) Others provide for L&E to provide access to works other than print or text for blindness, visual impairment, print and reading disabilities.
- (iii) Other member states go beyond the Marrakesh Treaty by making provisions for persons with aural, cognitive, and other disabilities, or by simply adopting the phrase, “persons with disabilities” or using mechanisms such as fair use without expressly referring to disabilities.
- (iv) The protected works to which the disability L&Es refer include literary, artistic, musical, dramatic, sound recording, TV broadcasts, cable programs, or just published works. Some countries did not specify the works covered by the disability L&E. For such countries, it may be argued that the lawmakers intended the disability L&E to extend to all works protected under the copyright statute in question. Interestingly, this group includes countries such as Panama, Paraguay, Peru, Republic of Korea, among others, whose L&Es do not go beyond the Marrakesh Treaty in terms of the disability covered.
- (v) Exclusive rights such as reproduction, distribution, and adaptation are mostly implicated by the L&Es provisions, especially among countries that cater to the disabilities falling within the ambit of the Marrakesh Treaty. Other rights covered include public performance, communication to the public, making available, rental (noncommercial), transcription, and translation.

Overall, it is observed that even countries that limit their provisions to the disabilities covered by the Marrakesh Treaty have gone beyond the treaty in terms of the protected works and the exclusive rights implicated by their L&Es.

5.1 | Specific disability provisions

Member states' legislation with specific disability provisions spells out the relevant disabilities (aural, visual, cognitive, or physical or other). It then sets out who may make the accessible format copies, which kinds of works and rights are subject to the exception together with which conditions must be met. Some countries also have import/export provisions and anticircumvention provisions which also allow one to raise the defense that the circumvention was carried out to facilitate the making of accessible format copies which are permitted by the relevant disability L&E in the copyright legislation. Where such provisions do not exist in the legislation, then the anticircumvention provisions will hinder the making of accessible format copies.

Specific provisions take two forms of which a few examples are discussed here. The first type of specific clause provides an exception for making accessible formats copies for persons with disabilities. This type of specific provisions is found in countries such as the United States of America (Copyright Act, 1976, ss110 and 121), Argentina (Law No. 11.723, 1933, Article 36; Law No. 26.570, 2009), India (Copyright Act, 1957, ss 52.1.zb and 31B), Israel (Copyright Act, 2007, s28A-E),¹ and Nigeria (Copyright Act, 2004, Cap 28, 2nd Schedule[s]). For instance, in terms of paragraph(s) of the Second Schedule to the Nigerian Copyright Act, the exclusive right granted over protected works does not include the right to control the

*reproduction of published work in Braille for exclusive use of the blind, and sound recordings made by institutions or other establishment approved by the Government for the promotion of the welfare of other disabled persons for the exclusive use of such blind or disabled persons.*²

The second type of specific provision is a fair dealing clause that enumerates the making of accessible format copies for persons with disabilities as one of the permitted uses. Specific provisions addressing fair dealing are statutory mechanisms used to facilitate unremunerated uses of copyright-protected works, without authorization, in certain named instances, which may include the making of accessible formats for persons with disabilities.

Australia's Copyright Act (1968) is one example. Uganda is another example and section 15 the Ugandan Copyright and Neighbouring Rights Act (2006) provides,

- (1) The fair use of a protected work in its original language or in a translation shall not be an infringement of the right of the author and shall not require the consent of the owner of the copyright where—*
(k) any work is transcribed into braille or sign language for educational purpose of persons with disabilities.

While both “fair dealing” and “fair use” may be characterized as having similar effect because they can apply to multiple categories of purpose—such as research and criticism—based on application of a common balancing test, there is a significant difference between specific provisions related to fair dealing (referred to as “fair use” under Ugandan law) for purpose of access by persons with disabilities and fair use as a type of general provision as discussed in Section 5.2; Band & Gerafi, 2015).

Technically, fair dealing and fair use differ when comparing the extent of their openness and flexibility. Fair use clauses are more flexible and open because they are premised on a nonexhaustive list of permitted purposes which means that they are available for any purposes that meet the fairness standard as enunciated in the factors to be considered. This is characterized as being “open to any purpose” (Flynn & Palmedo, 2017). In contrast, classic fair dealing clauses, such as section 15 of the Uganda Copyright Act, set out an exhaustive list of permitted purposes and do not enumerate the factors to be considered in determining the fairness of use (the “fairness factors”). They are complemented by a series of other exceptions that provide for other uses such as illustration for teaching and judicial reporting.

In some jurisdictions, the courts have confirmed that permitted uses under fair dealing clauses are exhaustive. For instance, *Super Cassettes Industries Limited v. Hamar Television Network Pvt. Ltd.* (CS(OS) 1889/2009), held that the enumerated purposes in India's fair dealing clause (Copyright Act, 1957, s52) are exhaustive. However, other jurisdictions, such as Canada, do not yet have case law finding that the list of permissible uses is exhaustive. Consequently, Katz (2013) argues that a court may find that useful for a purpose not enumerated in a fair dealing provision does not infringe copyright if it meets the fairness factors. This may very well be the case where fairness factors are provided for in the copyright statute, but it has not yet been judicially pronounced upon.

Fair dealing provisions typically include conditions that are applicable to the use of the work, such as attribution and an indication of the source of the work. Some national copyright statutes, such as Australia, include a list of factors to be considered in establishing the fairness of the use. The most important aspect of fair dealing clauses is that they must enumerate the making of accessible formats for persons with disabilities in the exhaustive list of permitted uses. If they do not, then it is not possible to rely on the fair dealing clause for that purpose. Fair use clauses, in contrast, do not have exhaustive lists of permitted uses and simply include a nonexhaustive or illustrative list. It is this openness and flexibility that facilitates the making of accessible formats for persons with disabilities.

5.2 | General disability provisions

The general disability provisions do not expressly mention disability but they are so broadly worded as to include the making and dissemination of accessible format copies for the benefit of persons with disabilities. Classic fair use clauses, as discussed above, are examples of general disability provisions. Section 107 of the U.S. Copyright Act exemplifies this kind of provision, as does section 19 of Israel's Copyright Act (2007). Another example similar to section 107 of the U.S. Copyright Act, can be found in sections 11(1)–(2) of Sri Lanka's Intellectual Property Act (No. 36 of 2003), which provides,

- (1) Notwithstanding the provisions of subsection (1) of section 9, the fair use of a work, including such use by reproduction in copies or by any other means specified by that section, for purposes such as criticism,*

comment, news reporting, teaching (including multiple copies for classroom use), scholarship or research, shall not be an infringement of copyright.

(2) The following factors shall be considered in determining whether the use made of a work in any particular case is fair use:

- (a) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
- (b) the nature of the copyrighted work;
- (c) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
- (d) the effect of the use upon the potential market for, or value of, the copyrighted work.

It should be noted that the courts in the United States have confirmed that the fair use clause in section 107 of the Copyright Act of that country permits the making of accessible format copies for persons with visual disabilities (*Sony v. Universal City Studios*, 464 U.S. 417, 1984). In *Authors Guild v. HathiTrust* (755F.3d at 101-03), the court held that granting print-disabled persons access to digital copies of universities' collections would constitute a permissible use under the fair use doctrine. Although the cases relate to persons with visual disabilities, there is nothing to suggest that other disabilities are excluded.

5.3 | Single or mixed/hybrid approach

As shown in the figure above, the specific and general disability L&Es are used by member states either in a single or mixed/hybrid approach. In a single approach only general or specific disability provisions are used. Gleaned from the appendix below, examples of states that have taken a single approach include Australia. Section 113E of the Australian Copyright Act (1968) provides for fair dealing for the purpose of access by persons with a disability. Another example is Article 36 of the Argentine Law on Intellectual Property, which allows the reproduction and distribution of literary or scientific works for persons with visual and sensory disabilities.

In contrast, the mixed/hybrid approach incorporates both specific and general disability clauses in the copyright regimes. The United States is a prime example of this. As stated above, the fair use provision in section 107 of the U.S. Copyright Act, which is a creature of the U.S. Constitution's First Amendment (*Golan v. Holder*, 565 U.S. 302, 328, 2002; *Eldred v. Ashcroft*, 537 U.S. 186, 219, 2003), is broad enough to permit the making of accessible format copies (*Authors Guild v. HathiTrust*, 755F.3d at 101-03). Also, sections 121 and 121A of the U.S. Copyright Act, introduced by the Chafee Amendment (P.L. 104-197, 110 Stat. 2394 Sept. 16, 1996), and updated following the implementation of the Marrakesh Treaty (Marrakesh Treaty Implementation Act, 2018) provide for an exception to reproduction rights for the benefit of the blind or other people with disabilities.

Another example of a country with a mixed/hybrid approach is Israel. While section 19 of the Israeli Copyright Act contains a fair use clause, its sections 28A–28E provide specific disability provisions.

6 | SELECTING A NORMATIVE OPTION FOR L&E FOR OTHER DISABILITIES

As indicated in Section 1, persons with disabilities constitute approximately 15% of the global population and they are largely located in socioeconomically disadvantaged contexts. Whilst the Marrakesh Treaty has made significant inroads toward ending the book famine and addressing the access needs of persons who are blind or have visual disabilities, other access needs must be addressed. Specifically, as set out in Section 3, for (a) access

to other types works for persons who are blind or have visual disabilities and of persons with other disabilities and (b) access to all kinds of works for persons with other disabilities, including aural, intellectual/cognitive and physical disabilities.

In creating such an approach, a pivotal starting point may be this paper's earlier assertion that "accessibility technologies enabled by machine learning can overcome the inefficiencies in individual remediation by automating otherwise costly accessibility efforts and enabling the ability to remediate works at scale." This is a viable starting point because, as shown in Section 4.1, several aspects of the Marrakesh Treaty address this point in relation to L&Es for print or textual works for blindness and other visual disabilities. The question then becomes whether this normative model should be extended to copyrighted works in formats accessible to persons with other types of disabilities. In our view, the challenges in relation to other disabilities and other works are the same and therefore the Marrakesh Treaty model ought to be extended, in principle. Specifically, the role of authorized entities remains important in the production and distribution of accessible format copies; as would provisions for cross-border sharing of accessible format works in contexts where beneficiary persons are from developing and least-developed countries or have limited financial resources, albeit with the necessary nuancing. In such contexts, AI might, at least in principle, reduce or eliminate the inefficiencies of individual remediation and thus reduce the need to share accessible works. The promise of using AI in this way will remain an unrealized promise in states with limited resources, so it is probable that for the foreseeable future cross-border sharing will continue to be an important tool to get accessible formats into disadvantaged contexts. However, in developed country contexts, it is possible that the prevalence of the use of AI and machine learning will rise for uses beyond remediation for disabilities. Therefore, it would be vital to ensure that any L&E that promote the use of such dual-use technology for remediation should be carefully drafted to limit the L&E exclusively to remediation purposes.

Further, it is important to note that remediation of other works for other disabilities presents new challenges that would have to be addressed. For example, much of the Marrakesh Treaty is premised on the type of work in issue, namely books or print works which are shared or exchanged between beneficiaries and persons acting on their behalf. Different considerations would come into play for other types of works which are used or shared differently, three examples will suffice to make this point. First, autocaptioning videos as they are played online for example. Second, AI and machine learning content summarization and clarification, which are automated remediation tools for hosted content frequently used in real-time as a person accesses and uses the content. Third, autocaptioning of audio works as they are played, such as Audible's auto caption tool. The model in use in these three examples is not permanent fixation in a hard copy work, which is then exchanged, as is the case with print or text works under the Marrakesh Treaty scheme. These remediation techniques and tools are real-time transformations that do not necessarily involve an exchange of physical copies of works between persons. They raise copyright infringement concerns as outlined in Section 3.2 and shown by current litigation against Audible (Mansfield, 2019). However, their resolution would require some innovation beyond the Marrakesh Treaty's approach. For instance, authorized entities would have to be defined and conceptualized to include the technologies providing the above types of remediations. A discussion of this is beyond the scope of paper and is addressed in a separate publication by one of the authors.

Finally, it is important to make a few remarks on the actual form that a normative instrument that goes beyond the Marrakesh Treaty, as advocated for above, can take. This is a form question, in addition to the substantive question, that has been alluded to in the above paragraph. The final form of such an instrument can take one of many configurations. The SCCR's Work Plan made this manifestly clear in its title *Provisional Working Document Towards an Appropriate International Legal Instrument (In Whatever Form) On Limitations And Exceptions For Educational, Teaching And Research Institutions And Persons With Other Disabilities Containing Comments And Textual Suggestions* (our emphasis). Such options would include binding instruments such as another treaty or soft law options such as a model law or the use of a Joint Recommendation of the WIPO member states at General Assembly. The final choice of form is best decided after substantive normative matters have been determined and will be informed by member states' views of practicality and feasibility, among other considerations. A full consideration of the form

aspect is beyond the scope of this study. Suffice it to note that an instrument other than a nonbinding instrument would be unable to achieve a mechanism akin to the Marrakesh Treaty's provisions on the cross-border sharing of accessible format copies in the absence of domestic provisions that permit such sharing.

7 | CONCLUSION

In terms of the CRPD, U.N. member states are obligated to ensure that their IP laws do not prevent persons with disabilities from participating fully in the social life of their communities. Persons with disabilities require different or a combination of accessible format of copyright-protected works to be able to participate effectively in educational, cultural, scientific, and social activities. While different technologies have been developed to enable the creation of accessible format of copyright works, the use of these technologies can adversely impact the exclusive rights of copyright owners. Similarly, the exercise of exclusive rights by copyright owners can pose barriers to the deployment of accessible format of copyright-protected works for persons with disabilities. Thus, appropriate legal frameworks are required to remove prevent the barriers that the exclusive rights would pose to the making and use of accessible format copies by persons with disabilities while preserving copyright owners' economic rights.

The Marrakesh Treaty was aimed to align international copyright law with the precepts of the CRPD. However, the Marrakesh Treaty fell short of this goal to the extent that it only covers the making of accessible format copies of print- and text-based works for persons with visual, physical, and sensory disabilities. The SCCR is now charged with the task of formulating an international normative framework within the WIPO system for L&Es in respect of the works and disabilities not covered by the Marrakesh Treaty.

While most WIPO member states have declared their support for the formulation of such an international framework to act as a guide for domestic lawmakers, it is important to note that some member states have already framed L&Es that are suitable to their local needs and circumstances, subject to their international obligations under existing copyright treaties. Indeed, there is evidence that a significant portion of the countries that have ratified or acceded the Marrakesh Treaty have taken steps to include disability L&E provisions in their domestic copyright laws in ways that have gone beyond the ambit of the Marrakesh Treaty. The evidence shows that the countries have taken varied approaches, with differences being evident in the disabilities covered, the copyright works to which the L&Es apply and the exclusive rights implicated by their respective L&Es.

This paper has argued, in Section 6, that several key aspects of the Marrakesh Treaty, such as the role of authorized entities and cross-border sharing would remain important and should be extended to any normative framework for L&Es for other disabilities beyond the treaty. However, it has also been argued that certain features of the type of remediation tools that may be used, such as real-time transformations of online works by AI and machine learning, present further challenges that will require careful nuancing of the framework to meet the concerns of stakeholders and the different types of work in issue. Attention should also be paid to confining exemptions granted to dual-use technologies to accessibility remediation only. Finally, the paper has flagged the form question that also has to be answered regarding the binding or nonbinding approach to be followed to extend disability-related L&E beyond those currently provided for by the Marrakesh Treaty.

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ENDNOTES

- ¹ This provision was introduced by the Law for Making Works, Performances and Broadcasts Accessible for Persons with Disabilities (Law Amendments, 2014), the Marrakesh Treaty, the Israeli Supreme Court's decision in HCJ 8536/11 *Bizchut—The Israel Human Rights Centre v. Ministry of Education* (Dec. 19, 2013) and the Law for Equality of Rights of Persons with Disabilities (1998).
- ² The Nigerian Copyright law is currently undergoing reform. If the reform is passed, the Nigerian L&Es for persons with disability will reflect a system that adopts both specific and general provisions (mix/hybrid approach). Generally, see Oriakhogba (2018).

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