FEELING ART
Crafting Intellectual Property Law to Enhance Disability Access to Artistic Works through 3D Printing Technology

Workshop Report

The workshop FEELING ART took place on 25 and 26 June 2018 at Statenzaal, in Maastricht University's Faculty of Law and represented an initial step in discussions about the intellectual property implications of 3D printing of artistic works for the benefit of the visually impaired. Ana Ramalho opened the event and gave the floor to Caine Chennatt.

Panel I – Social and technical challenges of 3D printing 2D art works

This panel was chaired by **Caine Chennatt**, from the University of Western Australia's Lawrence Wilson Gallery, and he first proposed an engagement exercise. The participants should, in a piece of paper, draw what they could see, but without looking down at the paper. This exercise would most probably result in very abstract drawings. In turn, if the audience could refer back to the on-going drawing as frequently as needed, there would be a point of reference which would much facilitate the exercise and enhance the artistic experience. This point of reference is exactly what most tactile experiences represent for the visually impaired. If the visually impaired people have the opportunity to touch the artwork as much as needed, they will be able to experience art in another level.

Vivian Saaze, from the Faculty of Arts and Social Sciences of Maastricht University, presented, from the perspective of art, the challenges derived from the 3D printing of artworks. The relationship between original artworks and reproductions, with the use of digital technologies, have become complex. The focus has always been on material authenticity, which has been challenged by digitization. Authenticity requires that an object must be true to its origins and must represent a direct link to a particular past or to the artist. That particular work represents the maker's intention and it bears a historic quality: the audience can be in the same room as the work that was touched by the artist.

3D scanning has been used with the purpose of conservation, the aim of which is to preserve the integrity of the object. With the 3D printing, however, there is a re-materialization of the artwork and we should first consider the narrative behind its use for this purpose. The fact that, with this technology, we can recreate the texture so as to enrich the artistic experience through touch is an interesting argument, even if we do not know whether, for instance, Van Gogh would have wanted the public to touch his sunflowers. It is interesting to note, however, that the maker's intent, that is one of the main arguments of the conservation theory, has now been used to support 3D reproductions that convey the intention of the artist to the visually impaired. Still, it is important to consider that no replica can take the place of the original work, that was crafted by the artist's hands, because a replica, according to Walter Benjamin, lacks presence in time and space.

Walter Benjamin, much before the digital age, wrote that the possibility of making mechanical copies can result in a loss in the aura of art. Recently, however, his essay was revisited by Bruno Latour and Adam Lowe, who affirm that the aura of the original is not lost through copying, but instead it gains an added

value. According to them, we should abandon the dichotomy between original and copy and think of artworks in terms of their lives, while considering only whether a work was well or badly reproduced. In the context of 3D printing, we should also consider what kind of experience is enabled by it.

Ann Blokland, the Senior Curator of Education of the Van Gogh Museum, explained the Museum's experience with exhibitions of 3D replicas of Van Gogh's paintings in a program set up to the benefit of blind and partially sighted visitors called Feeling Van Gogh. The first 3D high quality reproductions were made with a commercial purpose by the Museum shop. However, the potential of serving an educational objective that could offer something more to people with disabilities was rapidly identified. In this way, the Museum could carry out its mission of increasing accessibility to the life and work of Van Gogh while facilitating the exercise of a human right to culture. Alongside with an organization run by visually impaired, they planned the program, which involved an interactive tour through the museum and a multi-sensory session in the educational studio. The visit was so interesting that sighted people also enjoyed it and the target audience could experience a social visit to a museum, in which their friends and family were only there as companies and not acting as guides. The tour through the galleries had the goal to provide the experience of a regular visit to a museum, with its usual flow of people. The multi-sensory session, however, was made in a studio so that they visitor would not be too distracted and tired from the noise of the galleries. There they could have a quiet session with time to touch the artwork. The visually impaired interviewed after the visit were very enthusiastic.

The Museum staff, however, noticed that extra material is needed to provide a better artistic experience to VIPs. A person to guide people's hand while telling a story is useful. They have also tactile images to accompany the paintings, which have braille in it. They had some reproductions in relievo that did not work, because they were too complex to the visually impaired, but sighted people enjoyed them. They have used a maquette of Van Gogh's bedroom, which turned out to be a showstopper and really helped people understand the painting.

They consider the program to be very successful, as there is a feeling that the visually impaired participate and enjoy the visit as any other visitor. It also had the effect of making sighted people more sensitive about the different needs of visually impaired people. Museum staff must be trained to be able to welcome the visually impaired visitors. They have also built a prize for fund to encourage other museums to make their collections accessible, as they have earned a lot of expertise with this program. And they want to carry on the program and outreach the audience of people with visual impairments, taking the accessible format copies to schools and to rehabilitation centers.

Fernando Torrente, the responsible for Cultural and Artistic Activities at UICI, also spoke on the behalf of the World Blind Union. The need to ensure real access to works of art, museums and the cultural heritage to persons with disabilities derives from Art. 27 of the UN Human Rights Convention and Arts. 9 and 30 of the UN Convention on the Rights of Persons with Disabilities. People with disabilities should be involved in projects created to increase accessibility from the designing phase, in order to avoid products that turn out to be not accessible. As can be inferred from the UNCRPD, the motto should be "nothing about us without us". Institutions need to have staff adequately trained to meet the needs of disabled visitors to provide high quality assistance, which is especially needed when masterpieces are translated into tactile objects in bas-reliefs. The possibility of exploring a reproduction of an artwork through touch can be

interesting also for the sighted audience, especially school children, who can discover the importance of touch in a society that was invaded by images. They can learn that there are different ways to perceive and see things and very often children discover, by touch, details to which they had not paid attention before.

The translation of a work of visual art into a 3D format should not be considered a copy of the original, since it must be adapted to better meet the haptic needs of the visually impaired. They can understand well a bas-relief when it results from a specific version that looks in the tactic value an aesthetic equivalent of optical value for a reliable restitution of plastic perspectives and detailed features of a painting to the sense of touch. A true innovation is not carried out by technology alone but should always be accompanied by a new way of seeing things. The 3D printing technology has great merits, since it allows us to abandon the approach based on one single piece and entails a reduction of costs and a production at a greater speed. The use of this technology in combination with a research on new materials has made it possible to identify materials that reproduce with a fair faithfulness some tactile qualities of real materials. Moreover, it opens up the possibility of making our object something to be shared with others, making it available through tutorials. This could potentially lead to the creation of a library of objects to be reproduced, and this new technology should be integrated with others.

From a legislative point of view, the European Blind Union would like to see a harmonization of the various national legislations on the lawful reproduction of bas-reliefs, maquettes etc. to be used in museums and in institutions exclusively dedicated to the visually impaired, like the Omero Museum, which is the only publicly funded museum that is entirely dedicated to tactile artworks. This harmonization should consider the nor-for-profit character of this activity and the fact that the 3D printing for the benefit of the visually impaired does not amount to a reproduction, since it requires elaboration and adaptation so that the tactile perception is effective. The ideal solution would be to elaborate an international treaty to harmonize legislations, such as the Marrakesh Treaty, which is restricted to literary works.

Noel Daemen, a 3D printing expert and business consultant at 3D Maastricht BV, explained the activity of 3D printing process and presented the legal difficulties arisen during his daily work. He sells printers, carry out the printing for creative industries and manufacturing industries and gives consultancy to small and medium enterprises. Almost everything can be reproduced by 3D printing. The first step in the 3D printing process is the input, which can be the data of a design specifically created for this occasion, a design found elsewhere on the Internet or the scanning of an object. Then, there is the output, which is the object as printed. In some cases, there is a post-processing stage, where the object receives a chemical treatment or some other refinement. The process always involves a creative part, a production part and a commercial part. The process is accompanied by an agreement on data and copyright.

The choice of the material to be printed on is important and the choice of the software is even more relevant than the technology in the printer. Once you have scanned an object, you can change its dimensions and its design. You can play with the data and use your imagination and creativity. One difficulty is to know who owns the data on the file to be printed, especially of those freely found on the Internet. The possibility that a scan was made without authorization of the owner of the physical copy engenders a fear that the printing of that file might be unlawful, even if the work is in the public domain.

Lastly, some questions were made. **Ronan Deazley** asked **Ann Blokland** if the 3D versions of Van Gogh's paintings were sold at different prices for the visually impaired, but the answer was out of her reach, since it was dealt with by the museum shop and the products targeted a very specific market. **Ana Ramalho** asked **Fernando Torrente** whether there are existing working groups pushing for legislative intervention to harmonize the legal treatment to the creation of accessible formats of visual works to the visually impaired. He answered that they have been discussing how to make that harmonization happen as it did in the Marrakesh Treaty. The European Blind Union is very concerned about accessibility and legal harmonization with respect to these works. **Sérgio Branco** asked **Noel Daemen** how 3D Printing Maastricht separates what they know they can reproduce lawfully. He answered that it depends on the case, if the object to be reproduced was the creation of the client or not. Usually he asks clients a permission to further reproduce the same work. If the data was obtained unlawfully, they are actually not sure if they are allowed to print the object. It is difficult to know whether the data is protected and who is responsible for it. But they always check whether the work to be reproduced was licensed through creative commons.

Panel II – International framework for disability rights and exceptions

The chair was **Jure Vidmar**, Professor of Public International Law at Maastricht University. After reading the curricula of the lecturers, he handed over the floor to the first of them.

Lucie Guibault, from Dalhousie University, presented the international framework for copyright exceptions, with special focus on the Marrakesh Treaty, the final negotiations of which she had the opportunity to witness. Copyright protection, as determined by the Berne Convention, the TRIPS Agreement and the WIPO Copyright Treaties, is very broad. It includes all types of reproductions in any form and communication to the public, so, in principle, 3D printing of 2D artworks affects exclusive rights of the copyright owner. Therefore, in order to be carried out, authorization is in principle needed. The Marrakesh Treaty has the purpose of addressing the book famine. And the system of exception or limitation to copyright created by it must fit into the three-step test, which was reaffirmed four times in it. In the definition of accessible format copies, the moral right dimension is implicit. The Marrakesh Treaty, however, was not intended to apply to 3D formats of artistic works and it does not cover the activities at issue.

Regarding the general exceptions, the Berne Convention, in its Art. 9, provides for the three-step test. The 3D reproduction to the benefit of the visually impaired is unlikely to fail that test, as it could be considered a *de minimis* reproduction. The three-step test in the Berne Convention does not explicitly covers the right of exhibition, but with support on the TRIPS Agreement and on the WIPO Copyright Treaties, one could argue that this exclusive right is also covered.

Art. 6bis of the Berne Convention establishes the right to oppose to mutilation and distortion of a work that affects the reputation and honor of the author. This can vary dramatically from country to country. It is not because the work is in the public domain that it can be easily reproduced, because in some countries, as in France, moral rights are perpetual, can be exercised by the heirs and the State and do not require a damage to the reputation of the author, but solely a modification in the original work. As a conclusion, there is no clear provision allowing the 3D reproduction of 2D artworks and their public exhibition and there is no clarity on the impact of the 3D printing on the author's moral rights. The limitations that could be applicable are very ambiguous and unclear.

Anna Lawson, from the University of Leeds, could not be present to the workshop, but sent her notes that were read by Lisa Waddington. Anna was the first blind person to be made professor of Law in the UK and her presentation focused on the international framework for disability rights. The UN Convention on the Rights of Persons with Disabilities entered into force in 2008 and its purpose was not to create new rights, but to ensure that the existing human rights were available to people with disabilities. The material scope of the convention is, thus, extremely wide, as it covers all human rights. It established an obligation of non-discrimination, according to which Member States are required to prohibit discrimination based on disability by both public and private bodies. Discrimination includes failure to provide reasonable accommodation. Simply treating everyone in the same way can amount to discrimination, as equality requires different treatment when necessary. The Convention requires States to demand more proactive measures to public and private actors, which applies to museums and galleries.

Art. 30 of the Convention guarantees the right to equal participation in cultural life, which means that disabled people must enjoy access to cultural materials in accessible formats and laws protecting intellectual property rights cannot constitute an unreasonable and discriminatory barrier to access by persons with disabilities to cultural materials. This right is guaranteed to anyone in Art. 27.1 of the Universal Declaration of Human Rights and Art. 15 of the International Covenant on Economic, Social and Cultural Rights. The definition of cultural life cannot be found in any of those provisions but can be extracted from the General Comment number 21 of the Committee on Economic, Social and Cultural rights, which gives to it a very broad approach. Other general comments have been adopted by the UN Committee on the Rights of Persons with Disabilities, such as number 2 on accessibility (para. 15), number 4 on inclusive education (para. 56) and number 5 (para. 95).

The CRPD Committee has written concluding observations to several Member States and the comments, in relation to Art. 30, can be classified in three categories: a) those that don't mention Art. 30; b) those that mention it, but simply refer to the need to ratify the Marrakesh Treaty; c) those that, besides stressing the importance of the ratification and implementation of the Marrakesh Treaty, also point out some additional issues. It can be noted the important role that international treaties have in supporting and strengthening the work of the CRPD. Moreover, Art. 30 and its cultural life component seems to have become increasingly likely to feature in the concluding observations as time has progressed, especially since the Marrakesh Treaty has been adopted.

Lastly, the floor was opened for questions. **Vivian Saaze** affirmed that, since maquettes really help visually impaired people to engage with the artwork, as the experience of the Van Gough museum has taught, why the focus is on 3D scanning? Would the maquette be permitted under Copyright Law? **Lucie Guibault** explained that any type of reproduction of an artwork would be covered under the exclusive right of the copyright owner and, unless the activity is covered by an exception or authorized by the right holder, it could amount to an infringement, irrespective of the means used to reproduce it. **Ann Blokland** asked if Van Gogh's works are in fact in the public domain, expressing doubts about whether they could be freely used by others. **Lucie Guibault** affirmed that, since he has died more than 70 years ago, his works are in the public domain, even if the museum owns the physical paintings. She explained the difference between *corpus mechanicum* and *corpus misticum* to reinforce that, whereas the paintings belong to the museum, the reproduction of the same expression conveyed in them can be done by anyone lawfully. **Anselm Kamperman Sanders** pondered that the simple notion of reproduction would not be enough to cover the 3D printing of artworks, even if the Marrakesh Treaty was applicable, because most of the works, in order to have true meaning to the visually impaired, would be transformative. There is this additional issue we

should deal with. **Ronan Deazley**, in turn, pointed out that the Marrakesh is not completely inapplicable and can do at least some of the work that it is expected to do. It does not require that the work be reproduced in the same format as the original. **Lucie Guibault** stressed that the right of reproduction is construed very broadly and any adaptation, transformation, translation could be deemed to infringe this exclusive right if it reproduces a substantial part of the work. She concluded by adding that, in the best of all worlds, we would have a broad interpretation of the Marrakesh Treaty to allow the visually impaired to experience substantive equality, which can mean to allow them to experience 2D artworks in 3D formats and provide other measures to make it possible for them to participate in the cultural life.

Panel III – Mapping the gaps in legislation: Australia, United States, Canada, Brazil

The panel was chaired by **Anselm Kamperman Sanders**, from Maastricht University.

Jani McCutcheon, from the University of Western Australia, explained the Australian scheme to exceptions to copyright. Australia does not have a holistic fair dealing defense, even after the review carried out to adjust copyright to the digital economy, since there has been consistent resistance to that. There are only purpose-specific fair dealing defenses, including a new one, that was established in favor of persons with disabilities. There is also a new provision targeting institutions assisting persons with disabilities, but they are so narrowly defined that the focus of the presentation was on the fair dealing applied to individuals, that is in Section 113. A dealing of copyright material is not infringing if it is for the purpose of one or more persons with disabilities having access to the material. Case law has suggested, in respect to the research and study defenses, that the only person that can really rely on a fair dealing defense is the person with the direct purpose. If transposed to the fair dealing aimed at people with disability, this interpretation could cause a huge problem.

There are several statutory criteria that must be taken into consideration when determining whether a dealing is fair: the purpose and character of the dealing, the nature of the copyright material, the effect of the dealing upon the potential market of valuable material and the amount or substantiality of the part. These criteria are not statutory and were formulated by case law and it is in the light of them that the new fair dealing to the benefit of persons with disabilities should be interpreted. A definition of persons with disabilities was introduced and it applies not only to copyright works, but more generally to copyright materials. When considering the notion of fairness, we have to take into account the fact that artistic works are incredibly varied. To copyright, the notion of an artistic work is very broad. We have to think about conversions and how to facilitate better access through existing, emerging and future technologies. There is case law suggesting that the purpose and character of the dealing have an independent function to play. We always have to assess whether there is a commercial purpose in the dealing, that is, whether the dealing affects the potential market of value for the material. Assessing potential markets in a world of rapidly developing technologies is a difficult task. In this particular case, we would have to bear in mind that the technology is already available and there is some kind of growing market for consuming these kinds of 3D reproductions of artworks. The question, thus, is how to separate the use of the 3D reproduction for the fair purpose of giving access to visually impaired from illegitimate purposes in a commercial context. Some complimentary reform will be necessary.

There is a multiplicity of stakeholders and much broader issues to deal with. In order to make 3D formats of 2D artworks, we should have access to the source work. We should assess whether we need some kind of mandate to require third parties to facilitate the access to the materials by the beneficiaries of this exception. Australia is a good case study, because the law was correctly drafted. Still, there is the need to

spread the message about what the law allows to stakeholders and to people that can facilitate access to copyright material. A holistic view should be taken since additional issues such as contracts and technology for protection measures might come along. There is also the very serious issue of moral rights, as the manipulation required to produce 3D versions that are effective to the visually impaired might involve a transformation of the original artwork that may affect its integrity. However, in Australia, there is a reasonableness defense to an infringement of moral rights and if it is considered reasonable in the circumstances it occurred, it is ok. We still have to see how this reasonableness will be developed with respect to the new fair dealing exception regarding persons with disabilities.

Lucie Guibault also presented the Canadian framework on copyright exceptions and she noted that, even if Australia and Canada derive from the same legal tradition, they have followed different paths. Canadian Copyright Act has undergone a complete modernization in 2012 and it recently implemented the Marrakesh Treaty. When conceptualizing the perceptual disability, it basically mirrors the definition adopted by the Marrakesh Treaty, but expands a little to cover people with hearing impairments. While referring to the barriers encountered by the visually impaired, it says "reading", instead of using a more comprehensive verb such as "seeing". Copyright protection is very broad, and it includes the right of reproduction in a modified form, as long as a substantial part of it is reproduced. The copyright owner explicitly has the exclusive right to present the work at a public exhibition, and he has the moral right of integrity and of paternity.

The case law has developed some criteria to help identify a situation in which a dealing is fair: research, private study, education, parody or satire. There are other subsections with more specific fair dealings, such as criticism, news reporting. Some 3D printings made for the benefit of the visually impaired might fit this general fair dealing exception and the Canadian Supreme Court has expressly qualified the fair dealing as a user's right, which no other Supreme Court has done.

The Canadian legislator adopted a section including exceptions for persons with perceptual disabilities in the Canadian Copyright Act, which is not part of the fair dealing scheme. Section 32(1), contrary to the interpretation of the Australian legislation, is all inclusive. It refers to any type of work, including artistic works, and, thus, covers more than what the Marrakesh Treaty requires. Not only reproduction is covered by this exception, but also any other act that is necessary for that purpose. The only condition is that the work cannot be commercially available in an accessible format. The Canadian Copyright Act is in line with the strong equality rights jurisprudence in Canada.

Sérgio Branco, from the ITS Rio, has presented the copyright exceptions in Brazilian legislation. The existing law was passed in 1998 and it has a specific chapter with limitations to copyright (articles 46 to 48). There are in total 13 limitations, such as reproductions of short extracts for private use, parodies and works permanently located in public places. Outside these limitations provided for in an exhaustive list, there is no other exception. You cannot move your songs from your CD to your own iPod, for instance, without infringing copyrights. Also, since the educational limitation only refers to music and theater plays, you cannot exhibit a movie for educational purposes without infringing copyright. This is one of the reasons why Brazil is constantly said to have one of the worst copyright laws in the world when taking into consideration educational purposes. In 2009 and 2010, there were discussions about reforming the Copyright Law, but, due to the political chaos that we got in later, the project was never sent to the Congress and the discussions have ceased.

Besides the legislation, another problem with Brazilian Copyright Law are the courts, since judges are not educated in this field and often misinterpret the legal provisions. In a case that clearly involved a parody, the court held that there was infringement because parodies cannot be made during electoral campaigns. Courts have also found that there was an infringement when a work located in a public place was reproduced in tickets for the World Cup in Brazil because the reproduction was not being used for cultural purposes, even if that criterion is not in the law. However, there was a good decision from a Higher Brazilian Court that allows for a wider interpretation of Brazilian Copyright Law with respect to limitations and exceptions.

Article 46(I)(d) explicitly implements an exception for the benefit of people with visual impairments which covers any kind of copyrighted work to the exclusive use of the visually impaired, as long as the reproduction is carried out without a commercial intent, made through the Braille system or any other proceeding to the beneficiary. There is no known case involving this provision, probably because that are only few institutions that perform these activities and, even if unlawfully done, the rightsholder often does not do anything to enforce his rights. Brazil was very important in the negotiations of the Marrakesh Treaty, yet the Brazilian government is not doing anything to implement it. The public, however, can help raise awareness of the importance of 3D printing to help visually impaired people. There is a specific legislation addressing the inclusivity of people with disabilities, but it only refers to literary works, just as the Marrakesh Treaty.

Lea Shaver, of Indiana University, presented via Zoom the American framework on exceptions and limitations to copyright. Besides the open-ended exception known as fair use, there is number of specific copyright exceptions. In addition to the general fair use, three of these specific exceptions are good candidates to apply in the 3D printing of 2D artworks. However, the problem is that no one of them fits perfectly and, whereas the fair use is too broad and vague, the others are too specific. The first specific copyright exception is in Section 108 and is aimed at libraries and archives, that can lend digital formats and print them to give away to users. Libraries and archives were not defined neither by the statute nor by the case law, which gives rise to legal uncertainty. The suggestion is for institutions to look as much as a library or an archive as possible, to make it clear that protection within this section is being claimed. Section 110 covers not-for-profit performances and displays. However, display is only face-to-face interaction and would not cover the process of actually making the 3D copy and distributing it. Section 121 provides for the exception for blind and disabled. It is expressly limited to literary works and courts would hardly interpret literary works as encompassing visual arts. They have to be specialized formats accessible for disabled persons, but the only persons covered by the exception are authorized entities which exist precisely to serve people with perceptual disability. Museums, thus, would necessarily have to partner with one of these entities.

Even if these provisions are not certainly applicable, they provide support for the finding that this type of activity is one of the acts that the Congress wants to see exceptions created for. To summarize, not-for-profit activities carried out by specific entities whose particular mission is to provide support to the visually impaired and educate them, done in a way as to minimize the potential to undermine mainstream sales have to be permitted. Thus, the safest way to defend the activity of 3D printing of artworks is to claim fair use, but with the help of the other three specific exceptions, so that the fact that it almost fit them is an argument for the court to consider that it should be encompassed by the general exception of fair use.

However, under US system, it is important to take into account that, even if there is a strong fair use case, you are exposed to the risk of bearing the consequences of litigation, which can be severe. On the one hand, there are statutory damages, which allow the jury to set a figure between 7500 and 13000 dollars for each copyrighted work that was infringed. On the other hand, attorney's fees are not reimbursed. It is thus important to have a back-up strategy to avoid litigation without paying off. The answer might be to start a battle in the court of public opinion and shame the copyright owners for trying to get money from the non-profit endeavor.

Anselm Kamperman Sanders, before opening the floor to questions, added that, whatever loopholes there may be in the law of every jurisdiction, there is always the issue of freedom to operate and the risk and cost-assessment related to adaptation or transformation of the original works. If the transposing to 3D formats is transformative, we should ask whether there is copyright in the new works and, additionally, whether the moral rights of the authors that do not agree with this transformation will be affected. **Lucie Guibault** expressed concerned with the fact that, even if the reproduction of 3D printing is covered by the private use exception, the exhibition of it to visually impaired could amount to an infringement, since the copyright owner has the exclusive right to communication to the public. **Ronan Deazley** affirmed that he was not sure whether the exhibition would fall into the context of communication to the public. **Jani McCutcheon** pointed out that we should take into account the possibility of a beneficial drift. The reproduction may be made for a legitimate purpose, but then serve to another purpose that was not covered by the exception. Whereas most copyright holders will be happy to facilitate access to visually impaired, they may not be happy about losing control of their work. **Sérgio Branco** added that, interestingly, in Brazil, the right to exhibit would derive automatically from the ownership of the tangible copy, but still the user would not be able to reproduce it, even if for private purposes. In this situation, in Brazil, making the 3D printing would be more difficult from the legal perspective than exhibiting it.

Panel IV – Mapping the gaps in legislation: EU

Ronan Deazley, from the Queen's University of Belfast, was the chair.

Ana Ramalho presented the EU Copyright framework. The concern about new technologies being disruptive is not new, but time, market forces and other circumstances such as a change in legislation can provide for a balance between the interests at stake. 3D printing can amount to an infringement. Once you scan, you have the STL file, which is what you are going to print. The modification made to the STL before the printing can amount to an infringement of the economic right of adaptation and the moral right to integrity, which are not harmonized in the EU and, as such, are matters of national law. But the modifications, if necessary to bring the 3D model closer to the original, could be also considered a reproduction. In fact, in the *All Posters* case, the CJEU held that the reproduction right is quite broad and might include some acts of adaptation. Moreover, the printing itself can amount to a reproduction or an adaptation (and an infringement of the right of integrity) accordingly. The right of adaptation is only harmonized for softwares and databases. Most Member States have in their national legislations a separate exclusive right to adaptation, while others, such as the Netherlands and Belgium, have it as part of the reproduction right. With respect to the moral right of integrity, the treatment also changes to a great extent depending on the national laws. In France, it covers a right to have respect for the work and no damage to honor or reputation is needed for a modification to be considered an infringement. Moreover, it is a perpetual right. This can be a challenge to the 3D printing of artworks. In Germany, in turn, the copyright owner has the right to prohibit a distortion that may endanger his legitimate personal

or intellectual interests in the work. There is, moreover, a specific clause according to which the person who exploits the work can alter it if the author cannot in good faith object to that alteration. It is clear that this difference in legislations regarding moral rights in Europe stand in the way of a more harmonized solution for 3D printing of artworks.

The exceptions in EU Copyright Law are established in the Information Society Directive. Art. 5(3)(b) addresses specifically the exception to the benefit of persons with disabilities. Even if not mandatory, this exception was implemented in all Member States. In principle, they are not free to determine the scope of these exceptions, but in practice the implementation of it was carried out very differently across different Member States. We have countries which have simply reproduced the Information Society Directive's provision or otherwise reproduced the same scope. The majority of the Member States have implemented an exception with a narrower scope, either because it only covers the reproduction right, either because the purpose of the permitted act is narrower, either because it is subject to fair compensation. There are some countries, however, which have adopted a scope for this exception that is wider than the Information Society Directive's provision, either because they include artistic works, either because they cover other disabilities, either because they make exceptions to more exclusive rights. These countries, such as Italy and Finland, represent the best practices with which we could work.

The Information Society Directive protects TPMs and DRMs. However, in its Art. 6(4), it gives Member States the possibility of taking measures to guarantee that people with disabilities can benefit from the copyright exception whenever the beneficiary has legal access to the protected work, unless the reproduction for private use has already been made possible. Some Members States, like Germany, have implemented an obligation to grant means to circumvent to the benefit of the disabled people, but others have not. The issue, thus, is not harmonized and it remains to be seen how it will develop with respect to 3D printing of artworks.

The implementation of the Marrakesh Treaty brought about a new mandatory exception to the benefit of the visually impaired. The works covered are only literary works and related illustrations, which is only a small part of what we have been discussing. Directive 2017/1564 conveys a larger policy objective, as we can infer from its Recital 7 and Recital 18, which opens the floor for future legislative intervention to expand to works other than literary, since it is considered only a first step in improving access to works for persons with disabilities. Article 9 and Recital 19 of this Directive are incredibly promising, as they even mention that future report and review should take into account technological developments and an assessment on whether to broaden the scope of the Directive. Moreover, we should take into account that the CJEU has affirmed, in the Ulmer case, that an exception in art. 5(b)(m) of the Information Society Directive amounted to a user's right. Thus, there is an open door for us to conceptualize the copyright exceptions in another way. We also have the human rights frameworks, which can give us enough basis for the introduction of a broader exception.

Lisa Waddington, professor of European Disability Law at Maastricht University, considered in her presentation how the EU addresses access to culture for people with disabilities and also reflected on the access to artworks through 3D printing. First, the focus was on primary legislation. The EU has used Art. 19 of the TFEU to establish a binding duty for States to make a reasonable accommodation for individuals with disabilities. If we think of 3D printing of artworks as individualized measures in response of a specific request of a person with a visual impairment, we can regard it as a form of reasonable accommodation. The non-discrimination law, however, only applies in the context of employment and vocational training.

The EU concept on model of equality and non-discrimination also allows for positive action but does not require it. For the time being, however, EU Law does not cover art or culture. Articles 21 and 26 of the European Union Charter of Fundamental Rights refer to measures designed to independent, social and occupational integration and participation in the life of the community. Access to culture could fall within the scope of social integration, but it is not specifically mentioned. Thus, there is scope for bringing access to culture within the context of 3D printing of artworks within EU primary legislation, but it is not referred to explicitly.

With regard to International Law, The EU is party to the UNCPRD and its Article 30 addresses participation in cultural life, recreation etc. The EU is bound to the extent of its competencies, which, in respect to art and culture are somewhat limited. The Committee linked to the EU Convention has written concluding observations to the EU and some of them encouraged it to ratify the Marrakesh Treaty and implement it as soon as possible. The Disability Convention has not prompted significant developments in EU Disability Law and policy regarding culture. In February 2018, the Council approved the conclusion of ratification of the Marrakesh Treaty, thus, in the future, the EU will be bound by it.

The European Copyright Law allows Member States to make exceptions to copyright for the benefit of people with disability whenever the reproduction is directly related to the disability and of a non-commercial nature, to the extent required by the specific disability. In light of the Marrakesh Treaty, the EU has adopted a regulation and a directive, which implements a mandatory exception for the benefit of visually impaired. The Creative Europe Regulation is a program created to promote European cultural and linguistic diversity. One of its objectives is the improvement of access to cultural and creative works, particularly for people with disabilities. Moreover, the regulation recognizes the importance of digital technology in guaranteeing accessibility of cultural and creative works. However, copyright issues are not mentioned. The EU is in the final stages of adopting the European Accessibility Act to achieve greater accessibility for people with disabilities in the internal market. It covers a variety of areas, but not art and culture.

With respect to soft law, the most important instrument is the European Disability Strategy 2010-2020. It focuses on the elimination of barriers in eight areas and one of them is participation, which explicitly addresses access to art and culture for people with disabilities. It identifies full access to culture as a fundamental right, the exercise of which by people with disabilities is prevented by many obstacles. In 2017, the Commission published a progress report in which it identified initiatives to adopt and implement the Marrakesh Treaty, certain proposals regarding copyright legislation and the mainstreaming of accessibility requirement in various cultural policies. In 2003, the Council adopted a resolution on accessibility of cultural infrastructure and cultural activities for people with disabilities. Copyright, however, is not mentioned, and neither is the 3D printing. In 2016, the EU launched an EU disability card to ensure equal access to certain benefits for visitors from another Member State, which can include access to museums and other cultural activities. This can facilitate access to 3D formats of 2D artworks in the future. The conclusion is that EU is taking some action to support access to culture for people with disabilities. Promoting access through 3D printing, even if not explicitly referred to by any instrument, would be in line with current EU policy.

Ronan Deazley commented that it is good to hear some optimist and he affirmed that, with respect to moral rights, at least in the UK, the work has to suffer a derogatory treatment, which is expressly directed to damage to reputation. He cannot think of a situation in which one could meaningfully argue that

producing a 3D or an alternative representation of an existing copyright work for the purpose of enabling access for the visual or otherwise impaired would be considered derogatory to the artist's reputation. In France, however, he accepts that that could happen. **Lucie Guibault** stated that we should merge the two areas of law, combining the positive action derived from Disability Law with Copyright Law to push forward into permitted the use of this technology of 3D printing to give access to works for the benefit of the visually impaired. **Anselm Kamperman Sanders** disagreed with Ronan. If you are an artist and you know about a transformation of your work taking place, you would like to exercise control over it. Museums should have the duty to, when displaying or acquiring a work, immediately consult the artist to ensure that the 3D representation accurately portraits the meaning the artist wanted his work to have. He is not so sure that moral rights are not involved, especially if the 3D representation allows such a different kind of experience that becomes an art in itself. A 3D printing can be poorly done or can be excellently executed, and an artist will not be easily convinced to have his rights reduced, especially if the 3D version is transformative. **Ronan Deazley** pondered that if an artist decides to prohibit such a use for the benefit of the visually impaired, he would be condemned by the court of public opinion. Doing that would be far more prejudicial to his reputation. **Andrea Wallace** added that the artist may not be the best person to decide how the 3D printing should be done, since it has to be created to attend the needs of the visually impaired. If it is not too transformative, the solution would be to explain to the artist that there is a value in this type of use. **Fernando Torrente** affirmed that in Italy they have been making 3D reproductions of works of art for centuries, but they were unique reproductions, because made by sculptors. With 3D printing, things are different because you can make many copies with reduced marginal cost, which could be a problem to copyright. But, in order to obtain accessible works that are actually enjoyable by the visually impaired, the accessible format versions should be different from the original, as the experience will be tactile and not visual. If it is not a copy of the original that is being made, then there is not problem with respect to copyright. **Caine Chennatt** highlighted the role of the facilitator of the gallery, who works with the community of visually impaired people and the artist, to primarily honor the integrity of the artist. For a lot of artists, there is a process of letting go that happens once a work leaves the studio. Just as bad curation can lead to a bad interpretation of the work, there can be a bad 3D reproduction. This is when the role of the facilitator comes in to balance the access to the work in this modified form necessary for accessibility and the idea behind the work, while leaning towards an enhanced access to culture and engaging with what the work really is about, instead of focusing on the ideas that were behind its creation. The law is meant to keep a door open so that society can go through. While focusing on the legal aspects of the problem, we should try not to be too disconnected of the actual limitation.

Panel V – Mapping the gaps in legislation: UK

The panel was chaired by **Jani McCutcheon.**

Sabine Jacques, from the University of East Anglia, presented the UK Copyright Law perspective on the 3D printing of 2D artworks for the benefit of the visually impaired. She stressed that we need to involve more senses in order to render works accessible. Touch is an additional component, but it must be accompanied by other resources, such as a guide, which creates a narrative to better frame the work and lead the tactile experience. One of the advantages of this technology is that it makes possible to tailor the accessible copy according to the different needs of persons with disabilities. The Hargreaves Reform introduced Sections 31A to 31F of the CDPA and dramatically expanded its scope, because this exception became available to everyone with some form of disability and in relation to every protected work. These

provisions can be separated into two kinds of exceptions: for personal use of the person with disability or a person who assists him/her and for educational institutions or non-profit organizations. These exceptions do not apply if there are already accessible copies that have been made commercially available on reasonable terms. This is not a fair dealing exception, but a specific one, to which some conditions are attached. The definition of disabled person is very broad, and the impairment should prevent the person from "enjoying" a copyright work (and not "reading", as written in Canadian Law). The additional conditions for personal use are: the beneficiary must have lawful possession of the original work and the charge for the accessible copy cannot exceed the cost of making it. For authorized entities, there are more conditions applicable, besides the ones already mentioned: they can be educational establishments or entities not conducted for profit, they must have lawful possession of the original work, the charge must not exceed the cost of making the copy, there must be an acknowledgement of the original work and the author, authorized entities should keep records of the copies made and must show them to the rightsholder if asked to, obligation to notify rightsholders that a copy is being made and possibility to create intermediary copies, which are the STL files.

With respect to this exception, there is a specific ban on contract overriding exceptions. Thus, parties should not be able to circumvent the application of the exception through contract. DRMs or digital locks can make it difficult to create these accessible copies. In these situations, the available solution is to bring a complaint to the Secretary of State and either the copyright owner indicates where to get a readily available accessible copy either he/she provides a way to make an accessible copy to benefit from the application of this exception. This mechanism, however, has not been tested, which may be an indicator of its inefficiency. The UK has made some changes to accommodate cross-border supply of accessible copies in Section 27 CDPA and it remains to be seen whether this will be sufficient in light of the Marrakesh Treaty.

There is current consultation on the UK's implementation of Directive 2017/1564, but its results have not been published yet. One of the important topics is the possibility of moving from a commercial availability towards a compensation scheme. The provision mentions making and supply, which could be interpreted more strictly than the CDPA, which applies to all exclusive rights. The obligations that fall onto the authorized entities would have to be modified, because they now have more obligations than those established by the Directive. The exception can be extended to databases and we should consider a compensation scheme. The notion of "reasonable time" is likely to disappear after the implementation of the Directive and the complaint procedure regarding DRMs is probably insufficient to meet the needs of visually impaired. Moral rights should also be considered in this context. The possibility of CAT files to be considered as intermediary copies, and therefore protected, should be investigated. And finally, transformations should also be taken into account, as it seems that the underlying principle of the provision is to change the format of a copyright protected work only to make it accessible to people with disabilities. Thus, it seems that the 3D printing of a character of a book, such as the Petit Prince, would not achieve this goal and might not be covered by the exception. We have to ask ourselves how to introduce more flexibility into this rigid framework.

Andrea Wallace, from the University of Exeter, gave the perspective of some practices not only with 3D digitization, but also with 2D digitization that created a more inclusive space, putting physical space in the digital space. The core of what institutions are doing is situated in Contract Law and institutional policy making, especially when the reproduction of public domain works is involved. The definition of access in an age of inclusivity is difficult to formulate and it could be conceptualized differently by the law, by the

GLAM sector and the digital audience. The definition of open is also problematic and can be interpreted differently by different stakeholders. Different case studies can show what the GLAM sector has been doing, which allows us to have an idea of how the recommendations that will be put forward will apply to the new works that are being generated by them, especially with respect to reproductions of public domain works.

The legal notions about what qualifies as exclusive rights and what value there is in an IP framework are shaped by abled assumptions of a functioning society. These are the same assumptions that shaped the first exhibitions that were created for PVI audiences. The Tate Gallery hold an exhibition in which the visually impaired should come alone, because sighted people were not allowed, and the visitors were not guided as where to find the objects to touch. These efforts only reinforce separate spaces for abled and disabled. An accessible format copy is not only of value to PVI audience, but they also have a value to the abled audience. Most projects, however, are still based on material or physical assumptions about accessibility and physical sites of inclusion rather than digital institutions, and this can exclude certain audiences. This happens because sometimes the third-party partnership does not allow the entry online of these accessible galleries and oftentimes there is an obligation to generate revenue depending on the funding that was awarded to the institution. Generate evenue from IP serves as a way to fund and to attract partners, but the flipside is to lose the freedom to determine how the access should be defined. How should contracts be drafted to reserve access to disabled audiences? And what other restrictions like within loan agreements should be considered when making recommendations against access restrictions for PVI audiences?

The need to consider carefully the voices that should be involved in a process was illustrated by the exhibition Access + Ability, in which the disability designer consulted was disappointed with the institution failure to use the word disability (that they thought bore too much stigma) and to credit the designers which were disabled apart from those that were abled. She accused the museum of stealing her language without her values and she then created herself a program that showed projects that are often designed for people with disabilities but not with them. The MCA Chicago Coyote Software case showed us how that capturing different perspectives is important and that, since open source software involves multi-level rights and permission functions, we need to think about how we can manage this at the contribution level. The Touching Masterpieces Project illustrated how a different kind of feeling project could be generated from the same raw data that cultural institutions are producing but are not making available online. In order to make the 3D printings, we have to access the basic 2D high reproduction images, often of public domain works, that institutions are not making available online. How to request the image to make an accessible format copy without having to pay a fee? Lastly, the Arches Project demonstrated that a project designed for disabled audiences may also be accessible to the abled, and, thus, the open access needs to be reconsidered and redesigned for inclusivity. It may be necessary to work not only in a legal and institutional level, but also directly with the GLAM sector to balance the goals of income generation and mission-driven activities. For GLAMs it is important that efforts that increase access to art to PVI audiences do not exclusively benefit those who are able to visit physically the museum. There is a real risk that copyright might erect new barriers around content generating expanded access and enabling new knowledge generation to PVI audiences, therefore a clear guidance to GLAMs on how to explore their IP while giving accessibility is necessary.

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