DRM at the intersection of copyright law and technology: a case study for regulation

Severine Dusollier, University of Namur
DRM at the intersection of copyright law and technology: a case study for regulation

Séverine Dusollier

Professor, University of Namur, Belgium

Introduction

Digital Rights Management Systems (hereafter DRM), based on cryptography or other technical means, have been developed in the last years to address the thorny issue of protecting and managing copyright in an electronic environment. DRM are now embedded in DVDs, in some musical CDs, in online distribution of music, news, films, or images. They aim at controlling the use of the work, e.g. by preventing the access thereto by unauthorized persons, by preventing the making of a copy thereof, by allowing only the uses that have been paid for or by imposing the viewing or listening of the work on a specific device or in a determined region.

As soon as technology has been envisaged to enhance an effective exercise of copyright, it has been feared that a similar technology might be used to defeat the technical protection. The WIPO Treaties of 1996 have thus enacted a legal protection of the technical protection and were followed by many countries, such as the United States or the European Union. The relevant pieces of legislation in those States, known as anti-circumvention provisions, prohibit the act of circumvention itself of the DRM and the so-called preparatory activities, i.e. any act of distribution and manufacture of devices enabling or facilitating the circumvention. Part I of this paper will briefly explain the new copyright framework resulting from the development of DRM and their protection by the anti-circumvention provisions.

The anti-circumvention provisions are the most interesting battlefield between the traditional vision of the copyright law and the regulation by technology. DRM, as a technology, has noteworthy effects on copyright regulation. As will be described in Part II, DRM, as applied to constrain the access to and use of some works, acts as a technical norm regulating the use of an intellectual object, similarly to what copyright legal norms aim at. However the normative effect of DRM is rather different than the normative effect of the copyright law, both in terms of content and in terms of nature. I will henceforth address those differences and qualify the affirmation that as far as DRM and anti-circumvention laws are concerned, Code is Law (Lessig 1999).

On the other hand, DRM tends to dictate the very design of the copyright law to the lawmaker. The Part III will explain how the scope of copyright is not anymore decided according to what its proper scope should be, but according to what the technology can do.
The definition of the technical devices protected against the circumvention systematically refers not to the exclusive rights of the copyright owner but to what the copyright owner is able to protect through technology. This brand-new scope for copyright protection is not even limited by any limitations, exceptions or fair use provisions. The legitimacy, under copyright law, of making a private copy, a parody, a criticism, an educational or research use, does not matter as soon as a technical mechanism is able to inhibit such use or copy of the work. Therefore, any use of a work enters, through the legal prohibition of the circumvention of a DRM, in the arena of control granted to copyright holders.

Consequently, the ambiguous relationship between DRM and copyright is a particularly interesting case study for regulation. DRM can be both a new norm, parallel to that of copyright law, regulating the access to and use of copyrighted works, and the source for the copyright regulation itself. Technology is a complement, that does not completely achieve the wholeness of copyright law, but could also be a substitute that is likely to make copyright law completely irrelevant. This paper aims at describing this twofold action of the technology into the copyright norms and advocates that it is urgent for copyright law to resume its proper role.

X.1. Copyright protected and managed by technology

The digital age certainly raised new threats to copyright protection. But technology could also be seen as providing new tools and means to protect copyrighted works in the digital environment. Very soon, technological solutions or aids have been devised by the copyright industry. “The answer to the machine is in the machine”, predicted Charles Clark, in 1995 (Clark, 1995). To repair the legal fence that copyright used to provide for protecting works, a fence that began to collapse due to the assaults of the digital world, rights owners considered to erect a stronger and more effective technical fence.

Nowadays, the technical protection of copyright is not anymore a prediction or a dream and many copyrighted works are distributed in a protected format: musical CDs used to embed anti-copy mechanisms, DVDs contain a complex technical protection that prevents the copy, the playing on unauthorized devices or ensures a geographical distribution of the films, e-books cannot be copied, modified or used in certain ways. The legal on-line provision of music or films is aided by intricate functionalities that inhibit some uses, such as the redistribution of the work in peer-to-peer networks, the control of the transmission of protected content outside of a specifically defined user domain or the making of multiple copies. There are many other examples of the irruption of technological measures in the diffusion of copyrighted works, products and services, from music to films, from e-books to software.

Some technological measures aim at managing the licensing of usage rights and the provision of works in accordance to such usage rules: they are called Digital Rights Management or DRM. Such systems identify and describe the intellectual property rights pertaining to digital content and technically apply and enforce any usage restrictions decided by the rights holders as to such content. The success of the DRM terminology resulted in its use to name all
technology protecting copyright content, from access control mechanisms, that manage a user’s access to works, to anti-copy technologies that implement a prohibition or limitation of the copying of content. In the present article, DRM will be used to cover any technological measures that intervene in the protection of a copyrighted work, either by prohibiting some acts of use or by automatically enforcing and managing the usage rules related to such work. I will also refer to technological measures, that is the terminology used by anti-circumvention provisions.

Along the development of DRM to protect copyright, copyright holders have asked for a legal protection of such technical aids and barriers. Technology can be defeated by another technology, as it was proven by the early hacking of the DVD protection and of many other DRM systems. Laws have been enacted to prohibit the tampering with technological measures protecting copyrighted works at the international and national level. Such legal provisions prohibit the circumvention of the technical protection and the making of or distribution of devices that help or facilitate such circumvention. As I have written elsewhere (Dusollier 1999), the aim of such a legal recourse is to electrify the technical fence now surrounding and blocking access to copyrighted works. Building such a fence around works was not considered as sufficient and the fence-builders that copyright owners have become begged for a pain to be inflicted to those who still dared to go across the barrier.

The first international legislation that provides for such a protection was the WIPO Treaties of 1996 on Copyright and Related Rights, that require from the States that ratify them to:

“provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.”

Such obligation for an adequate protection of copyright-protecting technological measures has been complied with by the US in its Digital Millennium Copyright Act of 1998 (hereafter, DMCA) and by the European Union in an European Directive on Copyright and related rights in the Information Society of 22d of May 2001 (hereafter, copyright directive). This directive has been now implemented in all Member States.

Roughly described, anti-circumvention provisions make it illegal to circumvent a technological measure protecting copyright or to make or trafficking in tools or devices that could help or facilitate a circumvention. In both legal texts, a tool or device is deemed to be illegal when it is promoted, advertised or marketed for the purpose of circumvention, or has only a limited commercially significant purpose or use other than to circumvent, or is primarily designed, produced, adapted or performed for the purpose of enabling or facilitating the circumvention of any effective technological measures. The manufacture, import, distribution, sale, rental, advertisement for sale or rental, or possession for commercial purposes of such unlawful means is prohibited.

In the United States, the technological measures to be protected against circumvention are of two kinds. On one hand, it is prohibited to circumvent or to traffic in devices that aim at
circumventing technological measures that effectively control the access to copyrighted works. On the other hand, as far as technology measures that effectively protect a right of the copyright owner (i.e. the right to copy, to display, to perform, to distribute or to communicate the work) are concerned, only the distribution of circumvention devices is deemed to be unlawful. In Europe, the technological measures to be protected by such new provisions are broadly defined as “any technology, device or component that, in the normal course of its operation, is designed to prevent or restrict acts, in respect of works or other subject-matter, which are not authorized by the rightholder of any copyright or any right related to copyright” (art. 6(3) of the Copyright directive).

The issues raised by those anti-circumvention provisions are many. However, the main effect of the use of technology in the protection of copyright and the further intervention of the law to protect this technical aid is to multiply the layers of monopoly enveloping the copyrighted work. Henceforth, a piece of music or an audiovisual work is subject to three cumulative layers of protection. The first and traditional one is its protection by the law of copyright or related rights that grants to the author a defined power to control the use of her work. Secondly the work can be protected by a technology that inhibit some uses thereof. And that second layer of protection is doubled by the law, through the anti-circumvention provisions, that prohibit to neutralize or tamper with the technological protection. “Law – Technology – Law” has become the three-tiered protection scheme that can be applied to literary and artistic works. This threefold monopoly sets up new regulations into copyright which we will address now.

**X. 2. The regulation of copyright by technology**

The reservation brought forward by the recourse to technology sets up a new kind of control over the access to and use of copyrighted works. The new layer of protection granted by the DRM-technology to copyrighted works such as music, films, documents, e-books, has all the features of a regulative norm. It prevents users from carrying out some acts of access to and use of works, thereby acting as a “code” regulating the enjoyment of artistic and literary works (1.). This regulation by technology is however not neutral and brings about new norms applying to the enjoyment of artistic works (2.). Besides, such technical norm subtly differs from the copyright legal norm itself and such differences imply to consider the regulative power of the technology as somewhat relative and incomplete, albeit more extensive in some ways (3.)

**X.2.1. The regulative nature of the technological measure and the anti-circumvention provisions**

Through the joint efforts of the three forces, the copyright owner enjoys a broader monopoly over the work: her exclusive rights are completed by the factual control granted by the technical aid and by the new remedies provided by the anti-circumvention provisions. In 1989, M. Vivant and J.-P. Mousseron analyzed the different modes of control that one can have over an immaterial good (Vivant & Mousseron, 1989). They called such control a
“reservation” and draw a distinction between two major modes of reservation. First, the reservation by the secret, or the intellectual reservation, enables to keep the immaterial thing unknown by impeding or limiting its divulgation; second, the economic reservation, or the reservation by the market, divulges the work or invention while keeping some control over it, namely through the grant of an intellectual property right or of remedies sanctioning some behavior (as in the unfair competition practices). The history of intellectual property has gradually granted new legal reservations over the immaterial assets which promoted the divulgation and diffusion of intellectual works and products on the market, such as copyright or patent.

The reservation resulting from the combining DRM and anti-circumvention provisions is an hybrid mix of intellectual reservation (since technological measures can reduce the access to the works) and economic reservation (since technological measures will control the diffusion of the work in the market), of factual and legal modes of economic reservation. The technological control can either make impossible or reduce the access to or use of the work, or can monitor and manage such acts of use. In the first case, the reservation over the work is evident: the user cannot benefit from some use of the work. For instance, the acquirer of a protected DVD cannot make a copy thereof, whatever its purpose. In the second case, the user will be able to use the work, but such usage will be controlled and might be against remuneration, which is another type of economic reservation. An example is the FairPlay DRM enshrined in iTunes pieces of music delivered by Apple, where the number of copies and transfer to some equipment is limited and controlled.

In some way, the different sorts of reservation that a technological measure can accomplish as to a digital content, remind of the distinction drawn by G. Deleuze between the technologies of discipline and technologies of control (Deleuze 1990). Technologies of discipline constrain, lock up and prevent while the technologies of control authorize but in a regime of probation. Deleuze said that the regulation enforced by the first ones is a sort of mould, while that enforced by the second ones operates as a modulation. DRM are closer to a modulation mechanism of regulation, since they determine and adjust the extent of the use of the work allowed according to the user, to the license she entered into or to the remuneration she paid. They do not block the access to works but make it subject to the disciplinary conditions as decided by the right holder. Where the right owners decide to provide digital content with some defined usage rules, e.g. including a number of copies, a number of allowed viewings, etc…, this usage becomes the norm for the recipients and users of such content, even though the usage they are entitled to enjoy from such works under the law might be broader and less restricted.

In that sense, we can say, as L. Lessig (Lessig 1999) or, before him, J. Reidenberg (Reidenberg 1998), that the code is law, i.e. that the digital code put in place by DRM acts as a regulation thereby modifying our cultural and social behavior as to copyrighted works.
X.2.2. The false neutrality of DRM

The image of the copyright monopoly over works as reflected in the successive mirrors of the technical protection and the anti-circumvention provisions, has sensibly shifted to a broader control over access to and use of the works. In the technological measures and the anti-circumvention provisions, copyright is not portrayed alike but has been distorted to a worrisome extent.

Initially, copyright is about entitling the author to control the public exploitation of her works and to decide in what ways her works will be made available to the public. For that purpose, copyright grants the author with the right to authorize the making of copies of her work (right of reproduction) and with the right to authorize the diffusion of her work to the public (that could encompass, according to the country, rights of public communication, of display, of performance, of distribution)\(^v\).

The “public” element of such rights is crucial. The core of the copyright monopoly is the public diffusion of the work, either directly by acts of communication or indirectly by the making of copies that could be distributed or perceived by the public. What copyright covers is the making available of the work to the public; it is not the reception or enjoyment of the work by an individual, member of that public. This “publicity” of the copyright monopoly is rooted in the history and justifications of the literary and artistic property (Dusollier 2005, at 213-242).

In a digital world where intermediaries have disappeared and the copyright owners have started to distribute their works directly to the public, resorting to technological measures enables to control both sides of the transmission, from the making available to the reception of or the getting access to works. That is the very purpose of many DRM which are available today. Access controls manage the end user’s access to a digital content, DRM monitors and enforces the usage of the work by the end user, sometimes preventing the further distribution of the work to another public or impinging the making of a copy thereof, sometimes controlling mere acts of use that do not imply a copy or a public transmission of the work. The technological protection of copyright thus makes the access to, enjoyment, use and consumption of works enter the sphere of the monopoly exercised by the copyright holders.

This extension of the copyright area of control is not only allowed by a technical and factual action, but is also secured by the law through the anti-circumvention provisions.

In the United States, the case law applying the DMCA has construed the notion of the technological measures that were protected against circumvention so as to basically include any technology under the sun\(^iv\). If, by using the work, one is in one way or another faced with the operation of a technological function, even without noticing it, that technological measure is, under this case law a technological measure controlling the access to the work. The mere existence of a technical aid or control makes it a technology protected against circumvention! Therefore, the right holder, by using a technology to prevent any act of access to or use of the work, automatically gains the further protection of such a technical barrier by the anti-circumvention law.
It is the same in the European Union where the technological measure to be protected is defined as “any technology, device or component that, in the normal course of its operation, is designed to prevent or restrict acts (...) which are not authorized by the right owner of any copyright or any right related to copyright as provided for by law”\textsuperscript{vii}. Consequently, a DRM will be protected against circumvention as soon as it protects an “act non authorized by the right holder”. One could not dream of a better tautology: obviously, since the right holder has decided to technically protect an act of use related to her work, it means that she was willing not to authorize such act. Any DRM or anti-copying device is then addressed by such a legal remedy and the protection of the copyright law, by its anti-circumvention element, extends to any act of use of the work. 

In a way, it could be said that the normative action of the DRM and of the legal protection thereof, under the pretence of simply enforcing the rights of the copyright owners, have assumed a broader duty. DRM sometimes only replicate the rights granted by copyright (when they impede the copy covered by the reproduction right conferred by copyright law), sometimes they colonize new territories in the land of free uses of works (when they submit the number of viewing to a gradual fee). Either they reinforce the copyright prerogatives or they create new reservations over the work. The technical tool can thus act as a representative of the copyright as it technically convey the rights of the author, by preventing the reproduction, communication or modification of the work. But it can also go beyond that mere representative function and act as a mediator in the sense that the technology can shift the object of those rights or build up some new relations to the work, by constraining the access thereto, by determining the conditions for its reception and enjoyment (this distinction is borrowed from Latour 1993). In the first case, the technology will be the means of the copyright enforcement; in the last case, it is both the means and the end of an extended protection of the work.

X.2.3. The nature and scope of the technical regulation of copyright

It is worthwhile to note that such a normative effect of the technical regulation over works differs, in nature and scope, from that of the copyright law. Technological measures embedded into copyrighted works might have to some extent a more pervasive power in inducing and constraining a defined behavior as to the access to and use of works (1.). But this normative power is equally lesser than the traditional copyright norm, as far as the object of the norm (2.) and the operation of the norm (3.) are concerned.

X.2.3.1. The normative effect of the technological measure : an a-priori reservation

A key difference between any regulation by law and regulation by a technical act lies in the self-execution of the technical response to the norm infringement. This is particularly true with DRM in the copyright field.

The technical means imposes itself to any user of the technically-protected work. Its force rests upon intrinsic and immediate elements of the technological measure, that operate prior to
any copyright infringement. The technical norm prevents *de facto a de jure* infringement, it acts before the infringement to the legal norm of copyright could even take place. To that purpose, the technology is an *ex ante* remedy, i.e. a remedy that intervenes before the unlawful act that would justify the sanction. In a way, the technology replaces the morality which hopefully rests upon the user not to infringe the copyright. Yet, contrary to morality, the compliance with the law is securely and without any hesitation ensured by the technology.

That differs from the legal norm that applies *ex post* remedies that have to be asked in front of a court, thus resting on elements exterior to the infringed legal norm itself. As L. Lessig said, “the constraints of architecture are self executing in a way that the constraints of law, norms, and the market are not. This feature of architecture – self-execution – is extremely important for understanding its role in regulation” (Lessig 1999, at 236).

That self-executing norm makes the enforcement of the technological norm rather different from the enforcement of the law. Both norms integrate the idea of a “force” that is beautifully conveyed in the English terms of *enforcement, enforceability* or *to enforce the law* (Derrida 1994), or in the French expression *force de loi*. That principle of the “law in-force” is fundamental to the legal norm. The regulation enabled by the law finds its force in the very limits of the law itself, and solely within such limits. The “enforcement” of the law, that leads to the remedies and sanctions, draws its legitimacy in the law that is infringed, even though such remedies and sanctions have recourse to institutions and means that are parallel and external to the infringed legal rule and that intervene after the infringement. Conversely, the force embedded in the DRM or in other technical means of copyright enforcement, lies in the technology itself.

That gives to the technical norm a greater effect on the access to and use of copyrighted works. The user is somewhat forced to comply with the technological dictate, without being able to argue the legitimacy of that copyright enforcement in justice.

### X.2.3.2. The object of the DRM regulation: the embodiment of the work

However, the constraint enabled by the DRM on the copyrighted work is to some extent lesser than what copyright law achieves. Indeed, the monopoly that the technological measures grants to the copyright holders is somewhat limited. As a mere factual constraint, the technical barrier cannot enshrine the artistic work in its entirety, as an intangible and immaterial object. Technological locks, such as DRM, only encapsulate a tangible copy of the copyrighted work, its embodiment in a physical entity.

Such copy can be a tangible medium such as a disc, a tape, a piece of paper, a CD or a DVD, or it can be a stream of bits that conveys either the transmission of the work through digital networks or its storage in a hard disk or server. It is through such copies of the work, whether a tangible object or an intangible vector that enables its transmission, that the exploitation and commercialization of the work take place. As an example, the technical protection of DVD does not constrain the use of the film, that might be viewed in other formats, but rather the use of the film as embodied in that specific copy in DVD. As to DRM systems, their architecture usually comprises a repository of works that delivers and simultaneously secures
a copy of the work requested by the user. The making of a copy to be provided to the user is thus concomitant to the affixing of a technical protection. As “commodification is linked to the embodiment in a physical object” (Radin 2004), the technological protection of copyrighted works aims at securing the digital exploitation of the works through the commoditized forms of the work, thus increasing in turn the commodification of the works.

The work itself resists to any physical or technical appropriation, hereby making the technical reservation incomplete. The work might exist in unprotected format. Even though some recent works can be distributed only in technically-protected copies, they are only ersatz of the work itself. Copyright governs the intellectual work, the discourse or expression, that remains the same in the ubiquity and diversity of the material objects that embody it. Each of these material embodiments do not know the same uniqueness in such ubiquity (Bergé, 2002; Benabou, 2005). The artistic or literary work still exists beyond its embodiments. For instance, a piece of music, even though it has been publicly distributed in technically-protected format, has an ubiquitous and autonomous existence. It can be sung, performed, fixed, reproduced and communicated to the public. A literary work can equally be read or rewritten without the need for that copy to result from the material object. That is less true for other types of works, such as films, pictures or software, that are more strongly dependent of the media in which they are embodied. As to these works, their reproduction will probably require to go back to that media that might be technically protected.

As a conclusion, it is not the work as an intangible and diverse thing, but the work in its multiple materiality that forms the object of the technical reservation, the work as a commodity, as a good or a service. That does not mean that the technical measure has no effect on the work itself that exists also through its material embodiments. Access to the work depends on the number of material embodiments. Even though the pieces of Shakespeare are distributed as e-books that are technically protected against reproduction or free access, it is not very difficult to enjoy such works without any technical constrain. It will be the same with Mona Lisa, whose reproduction could be put on the Louvre Museum with an anti-copy mechanism, as many copies of the famous painting can be found elsewhere. On the contrary, should a film be distributed only in a technically locked-up DVD, access to its viewing, besides access to theatres that could screen it, will be only possible under the conditions laid down by the right owners in the technical features of the DVD. In that sense, one can say that technological measures produce scarcity in some cultural sectors.

X.2.3.3. The operation of the DRM regulation: a catalogue of technical acts

The rights granted by copyright reserve some acts of use of the work that are synthetically defined. For instance, the right of reproduction is defined so as to cover any act of copy of a work, whatever the way or technology of reproduction might be. The manual copy, the printing, the scanning, the filming, the adaptation, the caching of a work are all acts that will trigger the exclusive right of reproduction. The definition of reproduction or communication to the public is neutral in the sense that is not linked with any specific technology.
Conversely, what a technical measure can do to protect a work against undue reproduction will always be defined in an analytical way. No technical tool will be able to prevent all acts of reproduction that could be covered by the copyright law, but will pursue a specific function by inhibiting one precise act of copy, e.g. the printing, the burning of a CD or DVD, the making of a digital copy on one’s hard disk, or any other act of use, such as the access to one copy, the verification of the compliance of the player with the technically-defined format of the work, and so on. That specific and restricted function of the technical protection could be compared to what Bruno Latour called the “script of the device” (Latour 1993; Akrich 2006): a program of action that has been defined by the right holder and determines the design of the DRM.

Therefore, the DRM does not achieve the same type of control over the work as copyright law does. It is not, as some say, the machine translation of the rights of the copyright owners, but only the exercise and application of the will of the copyright owners as to one or some copies of the work and as to a defined act of use carried out in a defined context.

In other words, the technical reservation of the work is not as complete as its legal reservation. Even though DRM implies an immediate and proactive enforcement of its usage rules, it will be as extended as the copyright law in the work only by compiling each technical constraint on each embodiment and copy of the work. But the sum of all technological measures on each copy of the work could never constrain all potential users of the work.

X. 3. Copyright law designed by the technology

The technical protection of copyright has not only a normative effect by itself, it also induces the very design of the regulation by copyright law. Indeed, many features of the copyright regulation have been dictated, in the last years, by the technological norm. This technological mandate in copyright law is particularly evident as far as DRM are concerned. Anti-circumvention laws are strongly dependent of what technology can do and not of what technology should do according to social and legal norms.

Firstly, no lawmaker has ever prohibited or limited the use of a technological measure when the latter infringes the boundaries of copyright. DRM can be used to monitor and manage the use of public domain material. Anti-circumvention laws will not however bring any remedies against the person who bypass a technological measure affixed to non-copyrighted content or who sells means to circumvent such a technological measure. Nevertheless, the constraint on the public domain element remains, or, one should rather say, the constraint on one embodiment of a public domain element impedes the free use of that particular embodiment. DRM can also inhibit acts of use that could have a social value. For instance, e-books include a possibility for the right holder to prevent the display of the text in big print, as normally enabled by the system in favor of the visually-impaired people. The lawmaker has never had a reflection about the social consequences of such a technical regulation that is solely left upon the decision of the copyright industry.

Second, as we have seen earlier, the scope of the anti-circumvention provisions is largely defined by the scope of the technological measures. On one hand, the definition of the
technological measures to be protected against circumvention systematically refers not to the exclusive rights of the copyright owner, but to what the copyright owner is able to protect through technology. The US case law has protected any technological measure affixed to the work, since such relationship between the technology and the intellectual work technically meant that to get access to the work, one should necessarily pass through the technical gate, and hence unlawfully circumvent it, if no due authorization has been given. The European definition of the technological measures in the anti-circumvention provisions refers to the technical protection of any act unauthorized by the copyright owner. I have already said that such a definition makes any technical fence a protected technological measure as soon as its very presence indicates that the constrained act of use is not permitted by the rights owner.

For comparison, the WIPO Treaties of 1996 that are the source of the anti-circumvention provisions deal with “technological measures that are used by authors in connection with the exercise of their rights and that restrict acts which are not authorized by the authors concerned or permitted by law”. Here the link between the scope of the copyright law and the scope of the legal protection of technological measures is direct. The WIPO treaties do not entitle the copyright owners to gain further protection through anti-circumvention provisions.

The same is true with copyright exceptions and limitations or fair use. Most countries know some limitations to the copyright monopoly when other social or cultural values at stake, for instance for education, libraries, handicapped people, parody, quotation, criticism or review. What happens to such copyright exceptions when a technological measure can prevent any act of reproduction, whatever its purpose? Can a person be liable of circumvention activities when she tampers with a technical lock only to benefit from an exception afforded by the law or when she distributes circumvention devices in the sole purpose to help users to benefit from such exceptions? This certainly is the trickiest issue of the anti-circumvention provisions (Dusollier 2005).

While the WIPO Treaties paid attention to safeguard the copyright exceptions within the anti-circumvention provisions, by laying down that technologies that inhibit acts permitted by the law will not be protected against circumvention, the US and EU provisions did not. Both the DMCA and the EU copyright directive state that the technological measure prevails over the exercise of fair use or exceptions to copyright. Such exceptions excuse neither an act of circumvention nor an act of trafficking in circumvention devices. Armed with technological measures and anti-circumvention laws, the rightholder is now entitled to prevent the users from making a fair use of copyrighted works.

That clearly results from the EU Directive and from the US DMCA. Both texts provide for some safeguarding of exceptions, but those are rather limited and insufficient. The US legislation only lays down a list of very restricted and ill-founded exceptions to the circumvention prohibition and entrust an administrative body to evaluate the “adverse effect on fair use” that the application of the anti-circumvention provision might have. The EU directive imposes to Member States to find solutions so as the legitimate user of a work is able to benefit from some exceptions, albeit the presence of a technological measure constraining that normally free use. But this solution is limited to some exceptions and largely leaves room to the intervention of the copyright holders themselves. Indeed, the
solution is based on voluntary intervention of the rights holders. Such intervention, as the text of the directive implies, could be found in contracts with the user or in modification of the very design of the technology. One can think of putting in place technological measures that permit the making of one copy or of one low-quality copy. In Germany, scientific publishers have entered an agreement with libraries to provide them, upon some conditions, of non technically-protected versions of electronic publications so as to enable them to make preservations and archiving copies thereof.

Would the copyright owners propose anything to address those exceptions, the lawmaker is no more obliged to rule the matter. The logic of such solution is at best rather dubious: it entitles the copyright owner to employ any technical constraint on the work, but, in order to reassure the users, it encourages the former to let the user benefit from some freedoms, leaving the search for an appropriate balance to the copyright owners themselves and thus, once again, to fully deploy technical methods. The regulation by law is curiously absent from such an architecture.

Furthermore, that solution does not apply, according to the EU directive, “to works or other subject-matter made available to the public on agreed contractual terms in such a way that members of the public may access them from a place and at a time individually chosen by them”. The wording of this provision plainly refers to the definition of the right to make works available to the public, as laid down in article 3 of the directive. It would mean that any on demand service will not have to comply with the obligation to safeguard the exceptions and could be completely locked up. The vagueness of the wording could nevertheless jeopardize all the good intents of the European lawmaker. Making available works on the Internet on demand could become the prevalent business model for distribution of works. The requirement that such services have to be delivered on contractual terms does not matter much given the easiness to embed a click-wrap license in digital products. Some scholars have expressed concerns about this paragraph that could comprise the whole Internet and make void any obligation for preserving some exceptions. The uncertainty of the business models that will prevail on the Internet in the future could definitely prove them right. It also shows the prevalence that the European lawmaker is giving to the side of the copyright owners by letting them to exclude exceptions altogether by distributing their works under the terms of a contract.

Copyright owners are thus granted some legitimacy in controlling, through technology, acts of use traditionally exempted by copyright law. Here also, what technology can do becomes what the extent of copyright should be. One recital in the European directive is very clear for that matter. It says that “[private copy] should not inhibit the use of technological measures or their enforcement against circumvention.” In other terms, the European legal text validates the technological definition of what should still remain free private copy or not. Another principle of the directive tilts in the same direction. The European text says that the levies, that are traditionally applied to blank tapes and copying devices to compensate for private copy exception, should take into account the application of the technological measures preventing such private copies from taking place. This so-called “phasing out” means that, as soon as the anti-copy measures will be put in place, no levy should be paid on copying
equipment or blank tapes or CDs. Here again, the regime of a private copy exception in connection with a fair remuneration leaves place to a regime of a technical prohibition of the private copy. The private copy exception will nevertheless subsist in many countries, but in an ambiguous situation. As to technically-protected works, users will not enjoy anymore the copy that is granted to them by law, while, as non technically-protected works, authors will not benefit from the fair remuneration in compensation of the private copies that will still be made. The legal regime that embedded a fair balance between two interests has given the floor to a regime only defined by the technical capacity.

One should also remind that for all copyright exceptions that are not listed in the “safeguarding” regime of the European directive, the technical regulation can be as complete as decided by the copyright owners.

That technical colonization of uses that were recognized as uncopyrightable by the law can be explained by some law and economics discourse that tends to consider copyright exceptions and fair use as nothing but market failures. In such a view, copyright exceptions are not key elements in the copyright architecture that are justified by social and philosophical motives, but are simple areas without control that the copyright owner is doomed to tolerate for want of a way to fully exercise her rights. Technological measures are deemed to give back to copyright owners the control they lost over the uses that were so far tolerated as exceptions. Such a argument is rather circular: there is a market failure where the market alone can not achieve the better negotiation about the allocation of resources. As far as copyright exceptions are concerned, the law has already intervened to cure the existing market failure, by allocating to the users some uses of copyrighted content, e.g. because the social benefit of leaving such uses beyond the reach of copyright was considered stronger than the benefit to allow the copyright owners to control them. There could be a market failure only if the law had entitled the copyright owner to exercise her rights and if the market does not enable such an exercise. Therefore, the rhetoric about the original market failure that the technology could suddenly solve, thereby restoring a full copyright control (whereas copyright control has never been – and should never be – complete), does nothing but to create that market failure. That perverse reasoning makes it easy afterwards to claim that the exception is not justified anymore since the market failure has disappeared ! In another words, in order to prove that the copyright holder should be entitled to exert technical control over some uses, that have been allocated by law to the user, the argument in favor of the technological measures states that such control is already and in fiction enjoyed by the copyright owner.

**Conclusion : For a restoration of the law in the copyright regulation**

As a conclusion, one can certainly say that, in the United States and in the European Union, the technological capacity now dictates the legal scope of copyright protection.

Regulation by law has been determined on the sole basis of what the technology can achieve, without any due consideration of what should be the proper scope of the monopoly over works. The social and public justifications for permitting some uses of copyrighted works stand aside to let the technology deploy its whole capacity. Technological measures are
becoming substitutes to copyright even though they are still broadly advertised as mere complements to it. WIPO Treaties only addressed DRM preventing uses covered by copyright and gave immunity to copyright exceptions and limitations. Conversely, the EU and US anti-circumventions provisions address any use that technology can encapsulate and consider exceptions and fair use as nothing but failures of the copyright body that technology can heal.

That phenomenon has been dubbed private ordering by some American scholars (Cohen 1998; Samuelson 2002). N. Elkin-Koren has defined that notion as the fact that « the rule-making process regarding the use of information is privatized, and the legal power to define the boundaries of public access to information is delegated to private parties » (Elkin-Koren 2001). By resorting to technological measures for enforcing their rights, the copyright owners unilaterally decide what the extent of their monopoly, their reservation over their works should be and what the benefits of the users should look like.

Regulating the simple use of the works, or the access to the works, by technological measures and anti-circumvention laws, enables to regulate the distribution of the work to any individual. From exploitation of the work, its diffusion to the public as a whole, the copyright has shifted to the control of the business model, aided by technology, of distribution of copyrighted works to individuals.

This move has distorted the copyright law to an extent we are only beginning to experience and understand. The technology that helps achieve it was both the pretext and the mean to accomplish that shift of copyright.

How we should address this substitution of the foundations and principles of copyright by rules imposed by the mere technical fact, is one the key questions in copyright today. Failing to give an adequate and balanced answer to it would be stealing copyright from the public and give it to the industry. The public is becoming more and more contemptuous of copyright. It leads to an increasing tendency to infringe copyright. P. Goldstein once said that one great virtue of copyright is its balance, « one that weighs authors' interests against the need for public access. This balance has withstood, and been shaped by, the test of time and, however incompletely, has won civil obedience through the reasonableness of its command » (Goldstein, 1997).

By putting technology on the throne of copyright to achieve a more fine-grained control of the use of the work by individuals, one can only engender a greater civil disobedience. Technology as a tool to help copyright in the digital age would then finally be the end of copyright.

Thwarting this evolution should rest about a proper understanding of the very nature of technology and the way it interacts with law. By its very nature, technology is prosthetic: it creates a shortfall and substitute for that failure rather that completing it. For instance, the typewriter was namely invented to enable the blind to write, to access a mechanical writing. Finally used by everybody, the typewriter changed the way we write and communicate. When using such a machine, one has to unlearn the vision of the touch and appropriate a sort of blindness (Preciado 2000). Technology was created to remedy a deficiency but, in order to operate fully, it created itself a similar deficiency. The use of technology in copyright is
similar. It is a solution to a lack of an effective protection of copyright. However, in order to deploy its full operation and power, it has to create an absence of copyright or at least a dissimulation of copyright behind the dictate of technology. Restoring the law in copyright, going back to its source principles, is the only solution to keep a likeable balance in intellectual property and to use technology as an adequate tool and aid. The application of a technology-aided paradigm of copyright is about managing the relationship between technology and copyright law, not about replacing one by another.

One should, for that purpose, curb the extraordinary potential of DRM both to constrain use of works and to influence the lawmaker. That could be achieved by different and complementary legal actions. First, the lawmaker should not be reluctant in controlling what technology can achieve and could, in some cases, regulate the technical operation or even prohibit the technology from constraining some uses of works. The anti-circumvention legal provisions should also define technological measures to be protected by reference to the exercise of the copyright exclusive rights or to the use of technology in the frame of the copyright exercise, and not allow for more. Finally, the law has to find an effective and balanced solution for safeguarding the benefit of all copyright exceptions. The key social role and value of the limitations the lawmaker has imposed to copyright and to copyright owners should be stressed and reaffirmed.

We can regret that this is not the path that current copyright lawmakers have decided to follow.

---


iv This paper is taken in part from the thesis I have recently published about the consequences of the DRM protection of copyrighted works to the copyright regime and principles (Dusollier, 2005)

v In civil law countries, the author also enjoy a moral right whose objective is to protect her personality enshrined in the work through the rights of paternity (or attribution to use a less sexist terminology), of divulgation and of integrity.

Article 6 § 3 of the Copyright Directive.

17 USC § 1201(d) to (j)

17 USC § 1201(a)(C).

Article 6(4) of the Copyright directive.

Article 6(4) of the copyright directive.

Article 3 of the copyright directive states that « Member States shall provide authors with the exclusive right to authorize or prohibit any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access them from a place and at a time individually chosen by them».

Recital 39.

References:


S. DUSOLLIER, Droit d'auteur et protection des œuvres dans l'univers numérique – Droits et exceptions à la lumière des dispositifs de verrouillage des œuvres, Larcier, 2005


B. LATOUR, La clef de Berlin et autres leçons d’un amateur de sciences, Paris, La Découverte, 1993.


