

Copyright Law & Economics in the Copyright Directive: Is the Droit d’Auteur Passé?

Kamiel J. Koelman*

Computer/Law Institute, Vrije Universiteit, Amsterdam
koelman@myrealbox.com

In continental Europe, copyright is traditionally viewed as a so-called ‘natural’ right – briefly put: it is simply right for the author to enjoy the fruits of his labor. This is known as the *droit d’auteur* view on copyright. In contrast, in the Anglo-Saxon tradition, copyright law is perceived as having a socio-economic rationale. This rationale is expressed by the famous phrase of the US Constitution which states that the US Congress may “promote the progress of science and the useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries”.¹ The difference with the European approach is well illustrated in *Mazer v. Stein*, where the US Supreme Court held that “copyright law makes reward to the owner a secondary consideration”.² Reward to the author is not copyright law’s primary concern, as it traditionally has been in continental European jurisdictions. It is merely a means to an end.

Several commentators have observed that the differences in rationales between the US and the European copyright systems are fading.³ One reason for this tendency is that economic arguments are gaining weight in European copyright doctrine. Particularly, EU Directives on matters of copyright law indicate that economic insights are becoming more important in Europe.⁴ Perhaps it is not surprising that the utilitarian approach is becoming more influential, since the European Commission – which initiates the Directives – is habitually focused on achieving certain economic goals. Its mandate concerns the removal of barriers to the functioning of the single European market in order to achieve free trade between EU Member States. As will be shown below, the Commission’s fixation on free trade – in a more general sense – has found its way into the Copyright Directive (CD) of 2001.⁵

* The author would like to thank Ruth Towse, Stefan Bechtold and Thomas Heide for their very helpful comments. The article was last updated in November 2003.

¹ Article 1, section 8, clause 8 of the US Constitution.

² 347 US 201 (1954).

³ See e.g. P. Samuelson, ‘Economic and Constitutional Influences on Copyright Law in the United States’, *EIPR* 2001, p. 409; J.A.L. Sterling, ‘Creator’s Right and the Bridge Between Author’s Right and Copyright’, *IIC* 1998, p. 303-307.

⁴ See Recital 10 of the Council Directive 93/98/EEC of 29 October 1993 harmonizing the term of protection of copyright and certain related rights *OJ L* 290/9: “[T]he Commission stresses the need to harmonize copyright and neighbouring rights at a high level of protection since these rights are fundamental to intellectual creation and stresses that their protection ensures the maintenance and development of creativity in the interest of authors, cultural industries, consumers and society as a whole.” See also Recital 7 of Council Directive 92/100/EEC of 19 November 1992 on rental right and lending right and on certain rights related to copyright in the field of intellectual property *OJ L* 346/61: “Whereas the creative and artistic work of authors and performers necessitates an adequate income as a basis for further creative and artistic work, and the investments required particularly for the production of phonograms and films are especially high and risky; whereas the possibility for securing that income and recouping that investment can only effectively be guaranteed through adequate legal protection of the rightholders concerned.”

⁵ Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, *OJ L* 167/10.

In this contribution, it is investigated what the apparent economic policy goals of the Copyright Directive are. The purpose of this article is not to set-out new, cutting-edge economic theories on copyright law, but merely to analyze what the explicit and implicit aim of the Directive is and to explore what, according to standard and widely known economic theory, will be the likely result of the new regulations on copyright law. Will the Copyright Directive succeed in achieving its apparent goals? What does economic theory predict about its impact?

Law and Economics

For a good understanding of the following discussion, it is necessary to briefly and very elementary set out a few of the general principles of the so-called 'law and economics approach'.⁶ In this approach, the desirability of a law is not established by its 'justice', but instead by its 'efficiency'. That is to say, a 'good' rule is one that results in 'maximum social welfare'. Social welfare consists of the sum of the individual welfare of all market participants. Consequently, it is neither the welfare of the individual, nor the distribution of welfare over the various players, but instead the *total* welfare of society that is the point of reference. The above quoted phrase of the US Constitution may be understood in this context: the author should only be rewarded for his creative labor, if it enhances social welfare by promoting progress. If social welfare were to decrease if the rightholder could exercise exclusive control over, and thus demand payment for, usage of an information product, that usage ought not to be covered by copyright law, even if the author's position were to be undermined.

In order to analyze the impact of a policy change on social welfare, the theory of micro-economics is applied: in what way will a change of the law influence the decisions of market participants and how will their decisions affect social welfare? The decision makers are assumed to rationally strive only for their own wellbeing and to be perfectly informed. It is believed that, under those assumptions, a free market will lead to maximum social welfare, since no perfectly informed and rationally behaving *homo economicus* will engage in a transaction, if his situation will deteriorate by it. Therefore, transactions will only take place in cases where they enhance the individual welfare of all parties to the transaction. Because those who have the highest value for a good, are willing to pay the highest price and the seller will only sell for a price that is higher than his own valuation, the good will end up with the actor who values it the most and with whom it will therefore contribute the most to social welfare. The core idea of the law and economics approach is that a perfect free market will thus result in an optimal allocation of the resources. An optimal outcome is reached when no party is able to improve his position, without making another person worse off. Such a state of maximum social welfare is named 'Pareto-optimal'.

Economists know, however, that this is not a perfect world – or rather: a perfect market. Circumstances which prevent the market from achieving an optimal outcome are called 'market failures'. A market failure may provide a reason for the government to intervene in the market. Economists believe that once the failure is dealt with, the 'invisible hand' of the market will again result in maximum welfare. In the following it will be investigated which market failures are targeted by the Copyright Directive and whether that Directive may enhance economic efficiency.

One by one the various commonly recognized types of market failure will be dealt with. First, the existence of externalities and the issue of transaction costs are discussed. Second, the fact that information products may be viewed as public goods is analyzed. After that, the relevance of the market failure of the monopoly (imperfect competition) will be explored. Fourth, the phenomenon of price discrimination is reflected on, because, according to some,

⁶ See for a comprehensive introduction to the theory of law and economics R. Cooter & T. Ulen, *Law and Economics*, New York/Sydney/Amsterdam: Addison-Wesley 2000; see for an introduction to the law and economics of copyright law W.J. Gordon & R.G. Bone, 'Copyright', in: B. Bouckaert & G. De Geest (eds.), *Encyclopedia of Law and Economics, Volume II. Civil Law and Economics*, Cheltenham: Edward Elgar 2000, p. 189-215.

price discrimination may cure the above mentioned market failures. Finally, the problem is investigated that may occur if the parties to a transaction are not perfectly informed. While discussing those issues, the focus will be on the most important and controversial changes that the Copyright Directive brings about. These are the introduction of a right of temporary reproduction, the limiting of the exhaustion of copyright, the abolishing of remuneration rights and, last but certainly not least, the broad protection of technological measures.

Copyright Directive

Some previously adopted EU Directives show symptoms of the European regulator's adherence to the economic view on copyright law.⁷ But the recitals of the Copyright Directive more than ever express the law and economics approach to copyright. Recitals 2, 4, 9 and 10 of the Directive state that:

“Copyright and related rights play an important role in [fostering the development of the Information Society in Europe] as they protect and stimulate the development and marketing of new products and services and the creation and exploitation of their creative content. [A] high level of protection of intellectual property will foster substantial investment in creativity and innovation, including network infrastructure, and lead in turn to growth and increased competitiveness of European industry, both in the area of content provision and information technology and more generally across a wide range of industrial and cultural sectors. This will safeguard employment and encourage new job creation. [A] high level of protection [is necessary], since such rights are crucial to intellectual creation. Their protection helps to ensure the maintenance and development of creativity in the interests of authors, performers, producers, consumers, culture, industry and the public at large. Intellectual property has therefore been recognized as an integral part of property. [...] If authors or performers are to continue their creative and artistic work, they have to receive an appropriate reward for the use of their work, as must producers in order to be able to finance this work. The investment required to produce products such as phonograms, films or multimedia products, and services such as “on-demand” services, is considerable. Adequate legal protection of intellectual property rights is necessary in order to guarantee the availability of such a reward and provide the opportunity for satisfactory returns on this investment.”

These sentences are reminiscent of the Anglo-Saxon perspective on copyright. The author has to be able to recoup his investments, because that is to the advantage of all (i.e. of social welfare). Copyright stimulates the development of new products and ensures the maintenance and development of creativity. Below the claims made by these recitals are further investigated. Will the provisions of the Copyright Directive actually promote economic efficiency, or are the quoted phrases merely rhetorical?

Before addressing those questions it is important to note that one commonly accepted view on the optimal degree of copyright protection, or, more generally, on the efficient level of exclusive control over information products, does not exist. Rather, different scholars take different angles which lead to different opinions on what is the most efficient legislative approach to the information market. Often, those differences stem from the different types of market failure that the various commentators focus on (and, conversely, from the other ones to which they turn a blind eye). As will be shown below, the outcome of the analysis depends to a large extent on the viewpoint from which one studies the issues.

Property Rights, Externalities and Transaction Costs

A very influential line of reasoning is what may be called the ‘property right approach’. The provisions of the Copyright Directive appear to express a great faith in this approach, i.e. in the beneficial effects of granting to information producers strong and broad property rights in information products. In particular, the extensive protection of technological measures of Article

⁷ See *supra* nt 4.

6 CD may be interpreted in this context. But there are other provisions as well indicating that the Directive is heavily influenced by the belief that optimal efficiency may be achieved by conferring property rights in information products and by subsequently letting the market mechanism sort things out.

Externalities and Exclusive Rights

As is stated above, a free market is presumed to lead to maximum welfare in cases where the actors involved exclusively take account of their own wellbeing. The costs or benefits of their actions to others are ignored. Such effects on the welfare of others that are not taken into account and that therefore do not affect the market price, are called ‘external effects’ or ‘externalities’. The market price will not reflect the true social value of a good and therefore the market mechanism cannot have an optimal outcome, if externalities are not ‘internalized’. Where positive externalities exist, the price will be too low and therefore not enough of the product will be produced. The occurrence of externalities constitutes a market failure and may require government intervention.

Due to the special nature of information products – they are (to some extent) so-called ‘public goods’, which is discussed below – an information producer cannot reap the (full) social value of the products which he develops. The activity of information production therefore has positive external effects. Until a landmark article by Coase published in 1960, it was generally believed that such positive externalities must be internalized by granting subsidies.⁸ If the production of (public) goods which have positive external effects were to be subsidized, the producers of such goods would ‘experience’ their value to society and raise production. However, Coase showed that internalization may also be accomplished by conferring property rights in external effects. If those who bring about positive effects were to have the enforceable right to exclude others from benefiting of them, the parties would have to negotiate for those effects.⁹ The value of the effects would then be expressed in the price and the market mechanism would result in production and consumption to reach the optimal level. In this view, copyrights – i.e. exclusive property rights in information products – are intended to force the parties to negotiate for information usage and to thereby internalize the (formerly) external effects – one could say: the ‘spill-over’ – of the activity of information production.¹⁰

Transaction Costs and Copyright Limitations

Assuming that the user extracts value of any information usage, an information producer should, in this view, be in the position to demand payment for any usage. Therefore, any usage should be excludable.¹¹ Copyright, however, has many limitations. Its term, its subject matter and the scope of the restricted acts are all limited. In the property right approach, the copyright limitations are explained by the existence of transaction costs,¹² which are the costs of concluding and enforcing contracts.¹³ Externalities can only be internalized by granting property rights, if transaction costs

⁸ See D. Lindsay, ‘The law and economics of copyright, contract and mass market licenses’ (2002), p. 14-15, available at: http://www.copyright.com.au/reports & papers/IssuesPaper_Lindsay.pdf.

⁹ R.H. Coase, ‘The Problem of Social Cost’, *Journal of Law & Economics* 1960, p. 1-44.

¹⁰ One of the first to extend Coase’s reasoning to copyright law was Demsetz. See H. Demsetz, ‘Toward a Theory of Property Rights’, *The American Economic Review* Volume 57, Issue 2, Papers and Proceedings of the Annual Meeting of the American Economic Association (1967), p. 359.

¹¹ See e.g. Goldstein who argues that copyright should be extended: “into every corner where consumers derive value from literary and artistic works.” P. Goldstein, *Copyright’s Highway: The Law and Lore of Copyright from Gutenberg to the Celestial Jukebox*, New York: Hill & Wang 1994, p. 236.

¹² One of the first to rationalize the copyright limitations along these lines was Gordon. See W.J. Gordon, ‘Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors’, *Columbia Law Review* 1982, p. 1600-1657.

¹³ This is a mainstream definition of transaction costs. It has to be noted, however, that economists do not always agree on the meaning of the notion of ‘transaction costs’. See D.W. Allen, ‘Transaction Costs’, in: B. Bouckaert & G.

do not impede market formation. If these costs – which are, of course, passed-on to the end-user – are higher than the potential buyer’s reservation price, he will find the market price too high and will therefore not acquire the good. In such a case externalities cannot be internalized by a property right system. A free market – bargaining parties – can never result in the good ending up with the party who values it the most. Therefore, information usage of which the value is lower than the transaction costs should not fall within the ambit of copyright law.

It is believed that new technologies will reduce the transaction costs. Online payment schemes and technological measures – Digital Rights Management (DRM) systems – will facilitate cheap transacting.¹⁴ Additionally, technological measures would enable the automatic and low-cost enforcement of information licenses. Thus, no longer would the transaction costs provide a reason for limiting the control over information usage. As it becomes feasible to negotiate for and to control more types of usage, granting property rights in – exclusive control over – more kinds of usage may be efficient.¹⁵

The broad protection of technological measures of Article 6 CD may well be analyzed in this context. Under this provision, it is unlawful to circumvent a technological measure which blocks *any usage* for which the user did not acquire the permission of the copyright holder.¹⁶ Thus, not only is a license statutorily required to perform an act which is exempted under copyright law, but the statutory control of the rightholder also concerns activities not covered by the restricted acts under copyright law, e.g. the mere ‘consumption’ of – or access to – a technologically protected work. As the rightholders’ statutory scope of control is unlimited only in cases where technological measures are applied, the Directive may be read to express the view that the (copyright) limitations on the rightholder’s sphere of control can be abolished, now that, due to DRM-systems, the transaction costs are expected to decline.

Article 6(4) CD may support the conclusion that the Directive is based on the view that the transaction costs are the main rationale for the copyright limitations. Under this provision, EU Member States have to ensure that rightholders who hinder uses by way of technological measures, provide the means that enable certain information usage which is exempted under Article 5 CD. However, the provision adds that an obligation to facilitate a technologically blocked, but exempted, act may not be imposed on a rightholder, if the work is offered through an on demand service and there is a contract prohibiting the exempted usage.¹⁷ Apparently it is felt that, in cases where information usage is technologically controlled and where the transaction costs did not prevent to contract for that use, no limitations at all are necessary on the scope of control which the rightholder can exercise.

De Geest (eds.), *Encyclopedia of Law and Economics, Volume I. The History and Methodology of Law and Economics*, Cheltenham: Edward Elgar 2000, p. 893-926.

¹⁴ See K.W. Dam, ‘Self-Help in the Digital Jungle’, John M. Olin Law & Economics Working Paper (2nd Series) No. 59 (1999), p. 14 and 20, available at: <http://www.law.uchicago.edu/Lawecon/index.html>.

¹⁵ See T.W. Bell, ‘Fair Use vs. Fared Use: The Impact of Automated Rights Management on Copyright’s Fair Use Doctrine’, *North Carolina Law Review* 1998, p. 557-619.

¹⁶ Under earlier drafts of the Copyright Directive technological measures which “inhibit infringements” would have been protected. The enacted version of Article 6 CD, however, covers measures which block acts “which are not authorized by the rightholder”. Thus, the link between the scope of protection of technological measures and the scope of copyright appears to be broken. The explanatory memorandum with the Common Position by which the new definition of technological measures was introduced confirms this view. It states that the definition intends to “make it clear that Article 6(1) protects against circumvention of all technological measures designed to prevent or restrict acts not authorized by the rightholder, regardless of whether the person performing the circumvention is a beneficiary of one of the exceptions provided for in Article 5.” See No. 42 of the Statement of the Council’s Reasons, with the Common Position (EC) No 48/2000 adopted by the Council on 28 September 2000 with a view to adopting Directive 2000/.../EC of the European Parliament and of the Council of ... on the harmonisation of certain aspects of copyright and related rights in the information society (2000/C 344/01).

¹⁷ Article 6(4) CD states that a Member State may not impose an obligation on a rightholder to provide the means necessary to enable an exempted act in cases where “works [are] 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”.

Liability Rules and Remuneration Rights

The conviction that broad exclusive rights in information products enhance social welfare may also be deduced from the Copyright Directive's approach to the right of making available on demand granted by Article 3 CD. The Directive here radically breaks with previous policy.

Under Article 8(2) of the Rental Directive of 1992, Member States had to implement a remuneration right with regard to the broadcasting and the communicating to the public of sound recordings.¹⁸ The introduction of a remuneration right, instead of a right to prohibit broadcasting, may be explained by a theory first put forward by Calabresi and Melamed.¹⁹ They argue that property rights can be granted either by a so-called 'property rule' or by a 'liability rule'. Under a property rule, the owner is entitled to prevent all attempts to acquire the good, except by bargaining. Under a liability rule, the owner cannot prevent involuntary transactions, but merely has a right to compensation for the loss of the good. Typically, the owner can demand an injunction under a property rule, whereas he may only apply for damages under a liability rule.

In the first instance, the price is established by the bargaining parties, in the second, a public institution, often a judge, determines the value of (the loss of) a good. Many commentators feel that a property rule is generally favorable over a liability rule, because they believe that public institutions will never be able to set the price as efficiently as the market mechanism can. Nevertheless, a liability rule may be preferable in cases where high transaction costs inhibit market formation. Under a property rule, the good would not be traded, whereas under a liability rule, the good would at least find its way to the highest-value user with whom it would contribute the most to social welfare – albeit that the price may often not reflect the true (market) value of the good.

Copyright law's remuneration rights can be regarded as liability rule entitlements that are introduced where high transaction costs exist. In the case of the above mentioned broadcasting right, it is easy to see that it would have been impossible – extremely expensive – for broadcasters to lawfully use sound recordings if, when the right was introduced, they had to suddenly acquire a license of every artist whose recordings they broadcasted. The cumulative transaction costs might have stood in the way of using records altogether. Therefore, it was decided to grant a right to an equitable remuneration which has to be exercised by a collecting society. Thus, a broadcasting organization can clear the necessary rights with one (blanket) license. If the parties cannot agree and if negotiations fail, it is up to the courts to determine which price is 'equitable'.²⁰ Clearly, the remuneration right in respect of the broadcasting of sound recordings may be viewed as a liability rule entitlement.

Until now, every time an activity was brought within the ambit of copyright law which would have required a vast amount of licenses to perform it lawfully if it were granted in the form of a property rule, a remuneration right was introduced, instead of a right to prohibit the activity.²¹ The Copyright Directive, however, takes a completely different approach. Member

¹⁸ Council Directive 92/100/EEC of 19 November 1992 on rental right and lending right and on certain rights related to copyright in the field of intellectual property, *OJ L* 346/61; see also Article 12 of the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations of 1961.

¹⁹ G. Calabresi & A.D. Melamed, 'Property Rules, Liability Rules, and Inalienability: One View of the Cathedral', *Harvard Law Review* April 1972, p. 1089-1128.

²⁰ See e.g. European Court of Justice, 6 February 2003, Case C-245/00, *SENA v. NOS*.

²¹ On the European level an example is Council Directive 93/83/EEC of 27 September 1993 on the coordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission, *OJ L* 248/15. By introducing mandatory collective administration for cable retransmission, this Directive ensures that the necessary rights can be acquired with a few licenses. Another example may be found in the Rental Directive, *supra* nt 18, Article 5 of this Directive, which introduces a lending right, allows to insert a remuneration right for public lending. On the international level there are more examples. In the first decades of the last century, it was felt that the emerging recording and broadcasting industries should not be hindered too much by newly introduced rights. Therefore, Articles 11bis and 13 of the Berne Convention for the Protection of Literary and Artistic Works leave room for inserting a remuneration right – a liability rule – with regard to the right of

States are not allowed to implement the right of making available on demand as a liability rule entitlement. They must insert a property rule. Consequently, for instance a webcaster who offers programs on demand will have to acquire a separate license for every record used in his programs.²² He would have to find, contact, negotiate and contract with each rightholder to any recording he plays. The transaction costs involved could render the provision of on demand radio unfeasible (for anyone else than the rightholders to the recordings). At least, it is to be expected that the offered programs will not contain a huge variety of records.

The problem arises only with regard to the copyrights in sound recordings – or the ‘neighboring rights’ as they are often called in continental Europe.²³ It does not exist in respect of the copyrights to the compositions. Since long have there been collecting societies to whom the rightholders to the compositions have assigned the right to represent them. The collecting societies therefore are contractually authorized to license the rights for on demand webcasting or for any other form of on demand online distribution on behalf of their members.²⁴ A similar contractual structure is lacking in respect of the rights to sound recordings.

However, some commentators argue that the rise of the collecting societies for composers’ copyrights in the early twentieth century proves that the market is able to overcome the transaction costs problem on its own. Government interference – a statutory liability rule – is unnecessary and even inefficient. In their opinion, market solutions are by definition more efficient than government intervention can ever be. Merges, for example, recommends legislators to: “create the conditions for private parties to bargain into contractual liability costs. To do so, grant property rule entitlements in almost every case.”²⁵ The drafters of the Copyright Directive seem to follow Merges’ suggestion and to share his great faith in the market. It remains to be seen, however, whether a contractual infrastructure will indeed evolve.²⁶ Until it does, the variety of records in on demand webcasts will probably be rather limited. On demand webcasting – and other on demand services – could therefore be thwarted from taking-off.

Private Copying

The prohibition on introducing a remuneration right may express the belief that the parties involved will contract into liability rules. It may, however, also be explained by the expectation that DRM-systems will facilitate the cheap contracting directly with the rightholders to the recordings. Then, the collecting societies – as we know them – could become redundant. At most some intermediary which facilitates transactions, perhaps a trusted third party who operates a DRM-system, would be needed. No longer would a monopolist be required which, by way of the law or of agreements, is authorized to act on behalf of the authors or the performing artists.

The Copyright Directive’s treatment of private copying may be read to reflect this view. Many European countries have introduced a remuneration right in respect of certain kinds of

reproducing a musical work – the mechanical rights – and the right of broadcasting. See S. Ricketson, *The Berne Convention for the protection of literary and artistic works: 1886–1986*, London/Reading: The Eastern Press Ltd., 1987, p. 513 and 522.

²² Whereas the Copyright Directive only prohibits to introduce a remuneration right in respect of making the material available *on demand*, the problem only occurs with regard to on demand webcasting, not with regard to so-called ‘simulcasting’, i.e. webcasting a regular broadcast at the same moment that it is transmitted through the air waves.

²³ In the Copyright Directive they are called “related rights”.

²⁴ That is, if the contracts actually cover the rights concerning online usage of works. In cases where the rights to the compositions were assigned before online exploitation had taken off, it may be unclear whether the contracts also cover online usage. The German collecting society GEMA therefore felt that it was necessary to conclude new agreements with its members in order to ensure that it can represent them as regards online exploitation.

²⁵ R.P. Merges, ‘Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations’, *California Law Review* 1996, p. 1385.

²⁶ Not only is it unclear whether all rightholders are willing to grant to a collecting society the right to represent them, also it may be disputable who owns the right of making a work available on demand when rights have previously been transferred or licensed.

home copying. The rightholders are compensated by a levy on recording media or on recording equipment. Manufacturers of such products pay a sum to collecting societies who, in turn, distribute the monies over the authors. According to some scholars, Article 5(2)(b) CD implies that the remuneration right – i.e. the exemption – must be abolished when reliable technological measures are available and widely used which allow the direct internalization of the value of private copying.²⁷ If this interpretation is correct, again the liability rule is replaced by a property rule and again the main rationale for that appears to be the prospect that technological measures will bring down transaction costs.²⁸

Hold-Out

As is stated above, Article 6(4) CD requires Member States to implement an obligation for rightholders to facilitate certain technologically blocked, but exempted, uses. Only seven of the twenty-one exemptions which Article 5 CD allows the Member States to implement, have been singled out for this purpose. Mostly, the selected exemptions favor entities which often are (semi-) public institutions. They permit uses by hospitals, prisons, libraries, museums, educational establishments and broadcasting organizations, uses for the purpose of scientific research and public security, and uses in the context of administrative, parliamentary or judicial proceedings. The selection of exemptions may indicate that the provision is intended to prevent the so-called ‘hold-out’.

If a person knows that a good he owns is essential for another party – which implies that no substitutes are available – he may be inclined to hold out for a price in excess of his true valuation of the good. Thus, he hopes to force up the price. The hold-out problem is often analyzed as a problem of transaction costs; if a party holds out, negotiations may last longer, be more difficult and therefore be more expensive.²⁹ The transactions costs rise and may even prevent a transaction from taking place. As is explained above, in such circumstances a liability rule is preferable over a property rule. Since public entities often cannot conceal their intentions, a hold-out is more likely to occur in cases where a government institution is involved. Therefore, in most jurisdictions there are proceedings which allow the government to take a good without the owner’s consent. Similarly, the obligation of Article 6(4) CD to facilitate certain exempted uses may have been introduced in order to prevent the rightholder from applying the exclusive control provided by technological measures to hold out, if a (semi-) public entity finds it necessary to use the information product in the public interest.

If this actually is the rationale for the duty to enable the exempted usage and for the assortment of exemptions, it is remarkable that the hold-out is only forestalled with regard to material which is distributed offline or non-interactively online. The Directive does not bar the rightholder from applying the exclusivity based on technological measures in order to hold out in

²⁷ See Institute for Information Law (P.B. Hugenholtz, L. Guibault & S. van Geffen), ‘The Future of Levies in a Digital Environment’, March 2003, p. 42-43, available at: [http://www.ivir.nl/publications/other/DRM Levies Final Report.pdf](http://www.ivir.nl/publications/other/DRM%20Levies%20Final%20Report.pdf). See also Recital 35: “[...] The level of fair compensation should take full account of the degree of use of technological protection measures referred to in this Directive. [...]”, and Recital 39: “[...] When applying the exception or limitation on private copying, Member States should take due account of technological and economic developments, in particular with respect to digital private copying and remuneration schemes, when effective technological protection measures are available. [...]” This would imply that the remuneration right must be phased out, when reliable DRM-systems exist. Then, rightholders may fully control private copying by way of technological measures which, in turn, are protected against circumvention by Article 6 CD. In other words, if private copying is technologically blocked, one can only lawfully make a private copy with the rightholder’s permission. Thus, in effect, the exemption is abolished.

²⁸ See more generally P.S. Menell, ‘The Challenges of Reforming Intellectual Property Protection for Computer Software’, *Columbia Law Review* 1994, p. 2649: “As direct internalizing approaches become feasible, for example through the advent of less expensive metering technologies, they can be incorporated into the policy matrix.”

²⁹ See on the hold-out problem T.J. Miceli & K. Segerson, ‘Takings’, in: B. Bouckaert & G. De Geest (eds.), *Encyclopedia of Law and Economics, Volume Vi. Tax Law, Social Security & Administrative Law*, Cheltenham: Edward Elgar 2000, p. 328-357.

cases where the material is distributed on demand online. Under those circumstances the Member States may not require a rightholder to facilitate the exempted usage.³⁰

Enforcement Costs

Enforcement costs are part of the transaction costs. If private enforcement costs are too high, a property right will not be enforced and might as well not be granted at all. Of course, private entities will only decide to enforce their rights, if they foresee that the benefits of enforcement are higher than its costs. The easier information usage is detectable, the lower are the costs of enforcing exclusive rights concerning that usage. Additionally, the fewer parties have to be targeted, the more likely it is that the enforcement costs will be manageable.

From an economic viewpoint, it may be explained by the enforcement costs that copyright traditionally concerns copying, while the rightholder in effect only suffers damages if a pirated work is offered on the market – i.e. if it distributed or made available to the public in another way. Clearly, neither would it harm a rightholder, nor would it leave gains uninternalized, if many copies were printed without his permission, but these copies were kept in the storehouse. However, as there are fewer printers than bookshops, it is cheaper to control printers than it is to detect infringements of the exclusive right of distributing a work. Thus, strange as it may sound with regard to a right called ‘copyright’, the right of reproduction may be viewed to be merely an ancillary right to the right of distribution, instead of the core of copyright. In the ‘analogue’ offline environment, enforcement is further aided by diverting some of the enforcement costs to printers and publishers, who in many jurisdictions are held strictly liable for copyright infringements or have a duty of care to avoid printing without a proper license to the extent that they are almost strictly liable.³¹ The copyright industries have argued that enforcement costs should in the online environment be averted to other parties as well, specifically to internet access and hosting service providers. But the E-Commerce Directive establishes that online intermediaries never have to invest in systems which monitor for infringements.³² The rightholders have to bear the costs of detecting online infringements themselves.³³

In the light of the above, one might say that the right of reproduction was, what is called in Euro-speak, a “flanking measure”, i.e. a measure which covers the flanks of the truly important right (of bringing a work on the market). However, the function of the right of reproduction is changing. The ‘right of temporary copying’ granted in Article 2 and limited in Article 5(1) CD extends the scope of copyright to hard to detect transient reproductions in the computer’s random access memory.³⁴ Whereas – at the current state of technology – any digital usage requires such a temporary copy to be made, in effect an exclusive ‘right of digital usage’ is introduced.³⁵ Thus, no longer can the right of reproduction be regarded as a right that merely facilitates the enforcement of another right which more directly protects the rightholders’ interests.

³⁰ See *supra* nt 17 and accompanying text.

³¹ K.J. Koelman, ‘Online Intermediary Liability’, in: P.B. Hugenholtz (ed.), *Copyright and Electronic Commerce, Legal Aspects of Electronic Copyright Management*, Den Haag/Londen/Boston: Kluwer 2000, p. 16-17.

³² Article 15(1) of Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on Certain Legal Aspects of Information Society Services, in Particular Electronic Commerce, in the Internal Market, OJ L 178/1.

³³ A recently proposed Directive, however, intends to reduce the costs of enforcement. See Proposal for a Directive of the European Parliament and of the Council on measures and procedures to ensure the enforcement of intellectual property rights, Brussels, 30.1.2003, COM(2003) 46 final. To the extent that this Directive will require the public enforcement of copyrights, it allows rightholders to divert the costs of enforcement to the public authorities.

³⁴ A similar right already existed in the Software and Database Directives, but it has not often, if ever, been enforced in court. See Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, OJ L 077/20 and Council Directive of 14 May 1991 on the legal protection of computer programs (91/250/EEC) OJ L 122/42.

³⁵ L.A. Bygrave & K.J. Koelman, ‘Privacy, Data Protection and Copyright: Their Interaction in the Context of Electronic Copyright Management Systems’, in: P.B. Hugenholtz (ed.), *Copyright and Electronic Commerce, Legal Aspects of Electronic Copyright Management*, The Hague/Londen/Boston: Kluwer 2000, p. 104-106.

Article 5(1) CD states that transient copies necessary for the lawful use of a work are no infringements, if they have no “independent economic significance”. Neither the Directive nor its explanatory memoranda give much guidance on the meaning of this requirement. Would lawful use have independent economic significance for the purpose of the Directive if the rightholder is able to contract over that use and to enforce a license limiting it? If this interpretation were to prove correct, that would fit well in the property right approach. It is anticipated that the transaction costs will neither hinder the contracting for mere consumptive usage nor the enforcement of contracts concerning such usage, therefore, in this approach, it should fall within the scope of copyright law.

The drafters of the Copyright Directive explicitly viewed the protection of technological measures as a flanking measure.³⁶ Clearly, if technological measures function flawlessly, the enforcement costs will become much lower; it will simply be impossible to infringe copyrights. Moreover, as with the right of reproduction which enabled the cheaper enforcement of copyrights by allowing to hold an actor liable who did not directly harm the interests of the rightholder, but who acted ‘upstream’ to the actual harmful activity, the prohibition on circumventing technological measures may reduce the costs of enforcement. Furthermore, by aiming at the making and the distribution of circumvention devices (cracks), as Article 6(2) CD does, it may be prevented that people without considerable technical abilities perform the act of circumvention. Thus, infringements may be avoided at lower costs.³⁷

However, it does not do justice to its impact to view the protection of technological measures as merely a flanking measure. As is set-out above, this protection in effect introduces a new and extremely broad ‘exclusive right-like right’, because it statutorily allows the rightholder to control more uses than he could on the basis of ‘classical’ copyright law. It does much more than facilitating the cheaper enforcement of copyright law.

Public Good

The provisions of the Copyright Directive seem to indicate a strong conviction in the beneficial effects of granting broad exclusive property rights in information products. The Directive appears to follow the recommendations of Easterbrook, who is an outspoken proponent of the property right approach and who wrote that legislators should: “create property rights where now there are none; and facilitate the formation of bargaining institutions. Then [they should] let the world of cyberspace evolve as it will, and enjoy the benefits.”³⁸ Others, however, are not so sure that conferring property rights in information products enhances social welfare.³⁹ Many commentators assert that property rights – exclusive control over usage of a resource – may perhaps promote efficiency in markets for scarce, tangible goods, but that this is not the case with regard to markets for information goods, because they are not really scarce goods.⁴⁰

³⁶ See e.g. no. 53 of the Report on the communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions on a European Initiative in Electronic Commerce, COM/97/0157 def.: “The Commission will take a legislative initiative to deal with certain aspects of copyright and related rights. It will focus on on-line communications, reproduction and distribution of protected material. This will be *flanked* by adequate legal protection against the circumvention of anti-copy devices and electronic management systems.” (emphasis added).

³⁷ See also Lindsay 2002, *supra* nt 8, p. 35.

³⁸ F.H. Easterbrook, ‘Cyberspace and the Law of the Horse’, *University of Chicago Legal Forum* 1996, p. 216.

³⁹ The archetype of the ongoing debate on the desirability of property rights in information products may be found in the discussion between Arrow and Demsetz. See K.J. Arrow, ‘Economic Welfare and the Allocation of Resources for Invention’, in: R. Nelson (ed.), *The Rate and Direction of Incentive Activity*, Princeton, NJ: Princeton University Press 1962, p. 609-625; H. Demsetz, ‘Information and Efficiency: Another Viewpoint’, *The Journal of Law and Economics* 1969, p. 1-22.

⁴⁰ See e.g. Nobel laureate J.E. Stiglitz, ‘Public Policy for a Knowledge Economy’ (1999), p. 25: “It is imperative to understand the ways in which the production and distribution of knowledge and information differs from that of goods like steel and cars. [...] The fact that knowledge is, in central ways, a public good and that there are important

Therefore, the Copyright Directive's reliance on broad property rights and on the 'invisible hand' of the market may not be economically justifiable.⁴¹

Some scholars assert that the externalities which information products bring about cannot be internalized by granting property rights, because the value that the user attaches to an information product cannot possibly equal its value to society.⁴² Information products generally contribute to the functioning of a democratic society and they influence the social mores and collective sense of reality.⁴³ Educational use may be analyzed along similar lines. Teaching materials contribute to a 'highly educated population' of which all in a society benefit.⁴⁴ It is unlikely that consumers are willing to pay for those socially beneficial effects of information products, since they are so-called 'public goods'. Perhaps this is why Recital 14 of the Copyright Directive states: "This Directive should seek to promote learning and culture by protecting works and other subject-matter while permitting exceptions or limitations in the public interest for the purpose of education and teaching." However, as is explained above, Article 5 CD may contain limitations for the purposes mentioned in the Recital, but the protection of technological measures of Article 6 CD renders these exemptions meaningless, particularly if a work is offered on demand online.

Mostly, critics of the property right approach do not focus on the public good aspect of the impact on society which information products may have. Instead, they emphasize that information goods are themselves public goods. Standard economic theory predicts that market forces cannot have an optimal outcome where public goods – as opposed to 'private goods' – are concerned. Public goods differ from private goods in that their usage is non-excludable and non-rival. It is hard to generate income by producing a good the usage of which is non-excludable. After all, a *homo economicus* is not inclined to pay for something that he can take for free. Thus, even though there may, in principle, be demand, there will never be a market for non-excludable goods. Concomitantly, it is not very attractive to invest in the development of public goods. The analysis is somewhat related to the analysis with regard to the positive external effects of information products: because the producer is unable to reap the (full) value of information usage, not enough information products will be produced.⁴⁵ Therefore, as an incentive to invest in creating new works, rightholders must statutorily be authorized to exclude information usage.

externalities means that exclusive or excessive reliance on the market may not result in economic efficiency." Available at: <http://www.worldbank.org/html/extdr/extme/knowledge-economy.pdf>.

⁴¹ See for a critical analysis from this viewpoint of the US Copyright Act's protection of technological measures J.E. Cohen, 'Lochner in Cyberspace: The New Economic Orthodoxy of Rights Management', *Michigan Law Review* 1998, p. 462-563.

⁴² See N. Elkin-Koren, 'Copyrights in Cyberspace - Rights Without Laws?', *Chicago-Kent Law Review* 1998, p. 1182 and 1197 ff.; see also K.M. Sullivan, 'Free Speech and Unfree Markets', *UCLA Law Review* 1995, p. 963: "[S]peech is valuable independent of people's willingness to pay for it."

⁴³ See N.W. Netanel, 'Copyright and a Democratic Civil Society', *Yale Law Journal* 1996, p. 350-351; R.A. Posner, 'Free Speech in an Economic Perspective', *Suffolk University Law Review* 1986, p. 23.

⁴⁴ See F. Machlup, *The Economics of Information and Human Capital*, Princeton: Princeton University Press 1984, p.155; see also Stiglitz 1999, *supra* nt 40, p. 21-22; Cohen 1998, *supra* nt 41, p. 547-548.

⁴⁵ It must be noted that it is merely an assumption that the information production would stagnate if it were not stimulated by exclusive rights. There is no empirical evidence supporting the assumption. Some commentators assert that it is impossible to measure the effects of increased excludability of information usage, because the issue is simply too complex. Conclusive proof can therefore never be provided. See e.g. L.L. Weinreb, 'Copyright for Functional Expression', *Harvard Law Review* 1998, p. 1232-1234 and 1252: "[T]he arguments are dependent on social and economic patterns too complex to yield firm empirical conclusions." See also Machlup 1984, *supra* nt 44, p. 164-165; E. Mackaay, 'Legal Hybrids: Beyond Property and Monopoly?', *Columbia Law Review* 1994, p. 2634-2636. Perhaps the best chance to ascertain whether increased control over information usage actually enhances the incentive to create is just after a new intellectual property right has been introduced. Towse has investigated whether the introduction of the remuneration right with regard to the use of sound recordings provides an extra impulse for recording artists and concludes that it probably does not. See R. Towse, 'Copyright and Economic Incentives: an Application to Performers' Rights in the Music Industry', *Kyklos* 1999, p. 369-390. Others have tried to assess whether the recently introduced database right induced the production of databases and find that it is unlikely that it did. See S.M. Maurer, H.J. Onsrud & P.B. Hugenholtz, 'Europe's Database Experiment', *Science* 2001, p. 789-790.

Thus, in the words of the US Constitution, copyright law “promotes the progress of [...] the useful arts”.

However, the viewpoint which puts the public good features of information products to the fore goes one step further. It stresses that information usage is non-rival, which means that information products can be used by many people without rivalry or degeneration. Additional use of a public good, therefore, is without additional costs. If such use is excluded, it is prevented that one person becomes better off, without another becoming worse off. In other words, a Pareto-optimal outcome is hindered, which is inefficient.⁴⁶

Balance

The legislator is confronted with a dilemma. In order to enable an information producer to recoup his investments and to thereby promote the information production, the producer (the rightholder) must have the ability to exclude some usage. But by granting exclusive property rights in information products, another inefficiency is created: non-rival usage is hampered. Warren-Boulton et al. summarize the dilemma as follows: “efficiency in production requires that the producer receives a positive price, whereas efficiency in distribution requires that users should pay a zero price.”⁴⁷ It is impossible to at the same time achieve maximum efficiency in production and in distribution. A balance has to be found between the gain in social welfare of the increased incentive and the social loss of hindering non-rival usage.⁴⁸ The latter factor is often regarded as an important rationale for the copyright limitations.⁴⁹ In this perspective, it is unlikely that complete excludability – the ability to control *any* usage – is efficient, even if transaction costs are nonexistent.⁵⁰ Nonetheless, Article 6 CD allows a rightholder who applies technological measures to exclude any usage. Apparently, the Directive does not take the non-rival nature of information usage into account.

The Copyright Directive’s far-reaching protection of technological measures may be inefficient. It is, however, impossible to determine exactly how inefficient it is. Economic theory cannot provide an answer on the issue of which usage should be excludable and which ought not to be controllable by the rightholder. This is because it is impossible to know the optimal trade-off between incentive and non-rivalry. The price mechanism does not function properly where public goods are concerned. Therefore, it cannot be established how high demand is and, as a consequence, the level of incentive necessary for supply to meet demand cannot be known. If the optimal level of incentive cannot be verified, neither can the optimal degree of exclusivity that the law should provide. As Machlup states: “the dilemma has challenged the analytical intelligence of economists for hundreds of years, even though it has been only during the last fifty years or so that they recognized that it is the general dilemma of the provision and utilization of public goods. They have also learned that there is no solution that is satisfactory in a normative sense.”⁵¹

Only if it is assumed that the current balance is the optimal one – which cannot possibly be known – can it be assessed how a legislator should react to a change of circumstances. From

⁴⁶ See e.g. H.R. Varian, ‘Markets for Information Goods’ (version of 1998), p. 16; “As it costs nothing to share [information], it is efficient to do so.”; available at: <http://www.sims.berkeley.edu/~hal/people/hal/papers.html>.

⁴⁷ F.R. Warren-Boulton, K.C. Baseman & G.A. Woroch, ‘The Economics of Intellectual Property Protection for Software’, paper presented at the June 1994 meeting of the American Council on Interoperable Systems in Washington DC, p. 1.

⁴⁸ This balancing process is somewhat comparable to the balancing of the property right of the copyright owner with the users’ right to freedom of expression by which, according to some, the appropriate level of copyright protection could be established.

⁴⁹ See e.g. W.M. Landes & R.A. Posner, ‘An Economic Analyses of Copyright Law’, *The Journal of Legal Studies* 1989, p. 326; W.W. Fisher III, ‘Reconstructing the Fair Use Doctrine’, *Harvard Law Review* 1988, p. 1699-1744.

⁵⁰ See e.g. L. Lessig, ‘Intellectual Property and Code’, *St. John’s Journal of Legal Comment* 1996, p. 638: ““Sufficient incentive”, however, is something less than “perfect control”.”

⁵¹ Machlup 1984, *supra* nt 44, p. 160. According to Machlup, the market mechanism cannot reveal consumer preferences and alternative methods to find them, like consumer surveys, will not provide an answer either, because the respondents are likely to act strategically – i.e. they will not reveal their true preferences.

this perspective, Landes and Posner write: “because modern technology has reduced the time it takes to make copies as well as enabled more perfect copies to be made at low cost, the need for copyright protection has increased over time.”⁵² If one presumes that, due to the digital revolution, factual control over usage decreases, more statutory control may be necessary, even if more non-rival usage is thereby hampered.⁵³ Thus, the Copyright Directive’s sanctioning of the additional control that technological measures provide could be justified.

It remains to be seen, however, whether the digital environment will indeed undermine the incentive to invest. New technology may cause the information production to become cheaper. Therefore, the same level of incentive and production would remain if a producer were to have less factual control over usage. Moreover, the enforcement of the existing exclusive rights, in particular the right of making a work available to the public, may cost less in the digital online environment. Search-engines allow to automatically find infringers and streamlined notice and take-down procedures may enable the cheap and rapid cessation of infringing offerings to the public.⁵⁴ Thus, the enforcement might become more effective and the rightholder may, in practice, have more control, even without technological measures being applied, let alone them being protected.⁵⁵ Finally, the costs of copying and of distribution do not come down only for pirates (or for individuals who copy for private purposes), but also for rightholders. Therefore, they may be able to offer their goods at a lower price and the relative attractiveness of acquiring a pirated copy (or of private copying) and of buying a lawfully licensed work may remain unchanged. Digital technology would then not result in authors losing more customers to pirates than they did in the ‘brick-and-mortar’ world.⁵⁶ In summary, even if it is assumed that the current trade-off is the optimal one, it cannot be established at this stage whether more or less statutory exclusivity is needed. It is, however, unlikely that absolute control over information usage is economically efficient.⁵⁷

Monopoly

In one respect somewhat more firm conclusions can be drawn. In cases where a higher level of excludability does not increase production, the social loss of hindering non-rival usage increases while that loss is not compensated by a gain in social welfare of an enhanced incentive to create. In such circumstances, additional control must be inefficient. Mostly, this issue is analyzed in the context of the market failure of the monopoly.

⁵² Landes & Posner 1989, *supra* nt 49, p. 330.

⁵³ See e.g. R.J. van den Bergh, ‘The Role and Social Justification of Copyright: A “Law and Economics” Approach’, *Intellectual Property Quarterly* 1998, p. 23.

⁵⁴ See on such procedures R. Julià-Barceló & K.J. Koelman, ‘Intermediary Liability in the E-commerce Directive: So Far, So Good, But It’s Not Enough’, *Computer Law & Security Report* 2000, p. 231-239.

⁵⁵ According to Watt, perfect enforcement of the exclusive rights would probably allow the rightholders to charge higher prices, because the ‘competition’ of piracy which forces rightholders not to set excessive prices would cease to exist. Clearly, this could add to the incentive to create as well. See R. Watt, *Copyright and Economic Theory, Friends or Foes?*, Cheltenham, UK/Northampton, MA, USA: Edward Elgar Publishing 2000, p. 37 and 55; see also G.S. Lunney, ‘The Death of Copyright: Digital Technology, Private Copying, and the Digital Millennium Copyright Act’, *Virginia Law Review* 2001, p. 909.

⁵⁶ Recital 38 of the Copyright Directive shows that the Directive is based on the assumption that rightholders will be worse off in the digital environment: “Digital private copying is likely to be more widespread and have a greater economic impact. Due account should therefore be taken of the differences between digital and analogue private copying and a distinction should be made in certain respects between them.”

⁵⁷ To Easterbrook the uncertainty on the issue of what level of exclusive control is optimal, is an argument for following the property right approach. At least that approach provides for a somewhat more clear threshold on which uses should be excludable and which should not. See F.H. Easterbrook, ‘Who Decides the Extent of Rights in Intellectual Property?’, in: R. Dreyfuss et al. (eds.), *Expanding the Boundaries of Intellectual Property*, Oxford: University Press 2001, p. 405-414; see also Lindsay 2002, *supra* nt 8, p. 51. Lindsay concludes that the property right approach is preferable, because it is unlikely that the legislator will strike the right balance.

In a perfect market none of the actors is able to affect the market price. All adjust their behavior to that price; they are ‘price-takers’. Producers increase production if the price exceeds the production costs and vice versa. Thus, the price mechanism is believed to balance supply and demand. However, if a supplier has monopoly power, he is able to set the price and the level of output at will. Standard economic theory predicts that a monopolist will earn more if he offers less units at a higher price than producers in a perfectly competitive market would have.⁵⁸ The market mechanism will therefore fail to reach an optimal outcome. The social loss of a monopoly consists of the aggregate welfare loss of the consumers who would have bought the product at the lower price which would have been applied in a perfect market, but who find the monopoly price too high. In this respect there is a link with the analysis which focuses on the non-rival nature of information usage, whereas here too the efficiency loss is caused by the fact that the price is higher than optimal and that therefore less demand is fulfilled than would have been the case under optimal circumstances.

Copyright hinders market entry to some extent. The rightholder has the ability to exclude competitors from manufacturing and offering (near) perfect substitutes. But he cannot block any reasonable alternative for his own product. In cases where not enough similarity is found between the original and the allegedly infringing product, an infringement claim will not succeed. Because market entry with reasonable substitutes generally cannot be hindered, and the rightholder therefore has to take into account the prices that competitors apply, copyright does not grant a true monopoly.⁵⁹ Probably, it is more adequate to assume that copyright mostly causes a situation of so-called ‘monopolistic competition’, i.e. the offered products are not identical, but they nevertheless compete for the consumers’ attention.⁶⁰ Economic theory predicts that prices are somewhat higher under monopolistic competition than they are in a perfect market, but that the welfare loss will not be as large as it is in case of a truly monopolized market.⁶¹

The limited market power that copyright law confers, inefficient as it may be, is considered necessary in order to enable the rightholder to recoup his investments. In this setting, the above mentioned dilemma may be rephrased as: an equilibrium must be found between the social loss of granting market power and the welfare gain of thereby providing an incentive to create.⁶² As with the analysis of the public good aspect of information products, here too it is impossible to know exactly how much control the rightholder should have for an optimal outcome. Only if it is assumed that the current trade-off is efficient, can it be ascertained whether a broadening of the market power may economically be justifiable. Clearly, however, if increased market power does not induce production, it has to be inefficient. Prices will rise and information products will therefore be used less, while the decline in usage is not compensated by a higher output. This, however, is what the protection of technological measures of Article 6 CD may cause, because it may increase the costs of creating new works by allowing rightholders to demand payment for the re-use of non-copyrighable material.

⁵⁸ Cooter & Ulen 2000, *supra* nt 6, p. 277.

⁵⁹ E.W. Kitch, ‘Elementary and Persistent Errors in the Economic Analysis of Intellectual Property’ *Vanderbilt Law Review* 2000, p. 1734.

⁶⁰ R.P. Merges, ‘The New Institutional Economics’, *Vanderbilt Law Review* 2000, p. 1859. One has to be cautious, however, in generalizing on this topic. See e.g. Fisher 1988, *supra* nt 49, p. 1702-1703: “At one extreme are copyrighted works that consumers consider irreplaceable. At the opposite extreme are works for which (in the eyes of consumers) there are readily available, nearly perfect substitutes.”

⁶¹ Cooter & Ulen 2000, *supra* nt 6, p. 33.

⁶² See e.g. M.A. Lemley & D. McGowan, ‘Legal Implications of Network Economic Effects’, *California Law Review* 1998, p. 525. Stating that the copyright limitations are inserted: “to balance the incentives given to property owners against the harm experienced by consumers and next-generation competitors.”

Subject Matter

Probably, the most important copyright limitation to keep the market power of the rightholder within boundaries is the limitation of the subject matter of copyright. In the words of Lunney: “The need to avoid the risk of undue monopoly [...] imposes a [...] limit on copyright’s scope. By identifying those elements that must reappear in later works in order for consumers to consider the later works reasonable substitutes for the original, copyright limits the market power and the deadweight loss associated with the copyright on any given work.”⁶³ Presumably for this reason, ideas and mere factual information are not the subject matter of copyright. Because the more abstract copyright protected elements are, the sooner infringements will be found, the rightholder could probably block market entry with any reasonable substitute if ideas were copyrightable.⁶⁴ Factual information is either accurate or inaccurate. Therefore, reasonable substitutes for factual statements simply do not exist.

Samuelson has shown that technological measures allow an information producer to control the re-use of more elements of information products than he was able to previously. Technological access control – e.g. by encryption schemes – may enable a rightholder to act as a know-how licensor. The know-how licensor controls access to the secret information. Therefore, he is in the position to set conditions on the usage of information which is not protected by an intellectual property right. Technological measures may in a similar way facilitate to demand payment for non-copyrightable material.⁶⁵ Before the technologically protected information can be accessed and, subsequently, be used, the user will have to enter into an agreement stating that the seller’s permission is required for any re-use of even non-copyrightable elements. Thus, the licensor can block market entry in more instances, which enlarges his market power and allows him to raise prices.

Increased market power may therefore enhance investments in the development of new products. Paradoxically, however, it may also cause the information production to decline. This is because information production is thought to be cumulative. Next-generation creators necessarily have to build upon the work of their predecessors and to re-use elements of preceding works.⁶⁶ If more re-use is excludable, the rightholder may set conditions on re-use more often. Consequently, the costs of developing and producing next-generation products could increase which would result in fewer new products being created. Thus, the enlarged market power may reduce output and may therefore be inefficient.⁶⁷ Moreover, since the higher costs of creation will be passed-on to end-users, the second-generation products which do make it to the market will have to be more expensive and therefore more non-rival usage will be hindered.⁶⁸ Note that this view conflicts fundamentally with the property right approach. If a next-generation creator benefits of re-use of whatever element of an older work, the property right approach requires that his gains are ‘internalized’. Any re-use has to be paid for and therefore has to be excludable. It is hard to see how both views could be reconciled.

According to Benkler, newcomers to the market will suffer more of additional control over re-use than will the established copyright industries. The incumbents can freely use (elements of) products to which they own the rights, while newcomers will have to pay for any re-use. The economies of scale that the larger players enjoy – the larger their catalogue is, the lower are the costs of production – may result in a market that is dominated by huge media

⁶³ G.S. Lunney, ‘Reexamining Copyright’s Incentives-Access Paradigm’, *Vanderbilt Law Review* 1996, p. 524-525.

⁶⁴ See Gordon & Bone 2000, *supra* nt 6, p. 195.

⁶⁵ P. Samuelson, ‘Technological Protection for Copyrighted Works’ (1996), p. 23-25, available at: <http://www.sims.berkeley.edu/~pam/courses/cyberlaw97/docs/techpro.html>.

⁶⁶ See e.g. S. Scotchmer, ‘Standing on the Shoulder of Giants: Cumulative Research and the Patent Law’, *Journal of Economic Perspectives* 1991, p. 29-41.

⁶⁷ Landes & Posner 1989, *supra* nt 49, p. 348.

⁶⁸ J. Boyle, ‘Cruel, Mean, or Lavish? Economic Analysis, Price Discrimination and Digital Intellectual Property’, *Vanderbilt Law Review* 2000, p. 2016-2017.

conglomerates.⁶⁹ Mainly in relation to patent law, it has long been debated whether innovation is better served by stimulating large companies who are able to take large risks, than by encouraging smaller, perhaps more flexible and adventurous players. The issue has not yet been settled. Of course, the markets for “artistic and literary works” in which copyright traditionally operates, differ from the markets where patent law mostly plays its role.⁷⁰ Instead of innovation – the development of better, more efficient technologies which enhance society’s productivity – probably maximum *diversity* should be viewed as copyright’s main goal.⁷¹ One can, for example, hardly determine objectively whether Joyce’s *Ulysses* is ‘better’ – or even ‘more efficient’ – than Homer’s *Odyssey*, but the later work did undoubtedly add to consumer choice. Benkler argues that diversity may well decline if larger players are favored by a high degree of protection, because it is cheaper for them to re-use existing material to which they own the rights than to develop new products. In this perspective, it is too simplistic to claim that a “high level of protection” will increase competitiveness in the area of content provision and will promote creativity, as Recital 4 of the Copyright Directive does.⁷²

Protection of Technological Measures

Indeed, the protection of technological measures of Article 6 CD may provide for too high a level of protection by indirectly allowing to control the re-use of non-copyrightable material. At first sight, it appears that the protection of technological measures coincides with the limitation of the subject matter of copyright. From the definition of “technological measures” of Article 6(3) CD it follows that technological measures are not protected if they block the usage of material which is not the subject matter of an intellectual property right.⁷³ Such measures may lawfully be circumvented. However, the above sketched situation may occur when strong technological access control allows to set up a scheme in which a contract must always be concluded before the material can be accessed. Since the Copyright Directive protects systems that block acts “which are not authorized by the rightholder” – i.e. not just restricted acts under copyright law, but any act for which the user does not have permission – the Directive appears to protect technological measures which control access.⁷⁴

It may be that the circumvention of systems which control access to non-copyrightable material is permitted, but due to the prohibition on circumvention devices of Article 6(2) CD, those who are not technologically savvy will often be unable to exercise the ‘right to circumvent’. They lack the technical abilities to circumvent on their own and need circumvention devices supplied by third parties. Probably, the same technological measures will be applied to restrict acts with regard to non-copyrightable content as well as to material which is protected by copyright law. Concomitantly, circumvention devices which enable to access non-copyrightable

⁶⁹ Y. Benkler, ‘A Political Economy of the Public Domain: Markets in Information Goods versus The Market Place of Ideas’, in: R. Dreyfuss et al. (eds.), *Expanding the Boundaries of Intellectual Property*, Oxford: University Press 2001, p. 274 ff.

⁷⁰ The Berne Convention, for instance, initially intended to protect “literary and artistic works”. But in the last decades the fields in which both kinds of IP law operate are converging, particularly because functional technology, e.g. software, may now be protected by copyright law.

⁷¹ See W.R. Johnson, ‘The Economics of Copying’, *Journal of Political Economics* 1985, p. 158-174. Johnson concludes that the welfare gain of copyright depends on the value that consumers place on product variety. See also Netanel 1996, *supra* nt 43, p. 347-351. According to Netanel, copyright contributes to the functioning of a democratic society by ensuring that the largest possible variety of information products is available.

⁷² See T. Heide, ‘The Approach to Innovation under the Proposed Copyright Directive: Time for Mandatory Exemptions?’, *Intellectual Property Quarterly* 2000, p. 218; see also G.B. Ramello, ‘Copyright and Antitrust Issues’ (2002), available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=352760.

⁷³ Article 6(3) CD states: “For the purposes of this Directive, the expression “technological measures” means 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 [of rights] related to copyright as provided for by law or the sui generis [database] right [...]*” (emphasis added).

⁷⁴ See T. Foged, ‘The US v. EU Anti-Circumvention Legislation: Preserving the Public’s Privileges in the Digital Age?’, *EIPR* 2002, p. 537; see also *supra* nt 16 and accompanying text.

content will also facilitate to decrypt material which is copyright protected. It is conceivable that judges will rule that such ‘dual-use’ devices are unlawful, because if they do not, most circumvention devices will freely be available and the protection of Article 6 CD will likely not have large impact in practice.⁷⁵ On the other hand, if circumvention devices are not available, many users can, in effect, only get access to the material with the rightholder’s permission. Thus, the rightholder has the leverage to set conditions on the re-use of non-copyrightable material.

In conclusion, a combination of technological access control and contracts may allow a rightholder to control the re-use of non-copyrightable and non-secret content and the prohibition on circumvention devices may foster that development. The rightholder’s market power may thereby be expanded. Competition will be hindered to a further extent than it is by ‘classical’ copyright and the economic goals mentioned in the Directive’s recitals may therefore not be reached. The aforementioned balance may be upset in a way which increases the welfare loss of the market power, without this being counterweighed by a higher output of new information products.

Limits to Freedom of Contract

As is explained above, Article 6(4) CD does, to some extent, take account of a few of the copyright exemptions. It does not, however, require Member States to insert an obligation for rightholders to enable the usage of (elements of) technologically protected products that are not copyrightable. Perhaps because the Copyright Directive does not contain provisions on the subject matter of the intellectual property rights, the drafters of the Directive failed to see that a duty for rightholders to facilitate the usage of material which is not protected by an intellectual property right may be desirable.

The omission is even more remarkable, as the European legislator previously did ensure that a combination of contracts and technology could not indirectly result in a broadening of the subject matter of copyright. Articles 5(3) and 9(1) of the Software Directive of 1991 state that the reproduction necessary “to observe, study or test the functioning of the program in order to determine the ideas and principles which underlie any element of the program” is not an infringement and that this exemption cannot be ‘overridden’ by contract.⁷⁶ If this reproduction were covered by copyright, the rightholder would have been empowered to prohibit the accessing of the ideas behind and the mere functional aspects of computer programs, which would – as it were – have stretched the subject matter of copyright and thereby have increased the rightholder’s market power.

With respect to other areas of intellectual property law the European Commission has issued a regulation which may be read to express that it is to be prevented that the usage of information which is not protected by an intellectual property right is controllable too extensively. The Commission’s block exemption with regard to know-how and patent licenses lists clauses in technology transfer licenses which do not violate the anti-cartel provision of Article 81 (formerly 85) of the EC-Treaty.⁷⁷ Additionally, it clarifies which terms are likely in breach of the provision. Know-how licenses that are not limited in time fall in the second category. Apparently, it has to be prevented that competition is hindered if the know-how no longer is secret.⁷⁸ Also, clauses are forbidden which prohibit the licensee to develop and sell competing

⁷⁵ See K.J. Koelman, ‘A Hard Nut to Crack: the Protection of Technological Measures’, *EIPR* 2000, p. 274.

⁷⁶ *Supra* nt 34.

⁷⁷ Commission Regulation (EC) No 240/96 of 31 January 1996 on the application of Article 85 (3) of the Treaty to certain categories of technology transfer agreements, *OJ L* 031/2; see on the regulation M.D. Powell, ‘Technology Transfer, The European Commission’s Technology Transfer Regulation’, *Computer Law & Security Report* 1997, p. 126-131. The Commission is currently considering to change the regulation, see Competition rules relating to technology transfer agreements, Communication pursuant to Article 5 of Council Regulation No 19/65/EEC of 2 March 1965 on the application of Article 81(3) of the EC Treaty to certain categories of agreements and concerted practices, as last amended by Regulation (EC) No 1/2003, *OJ C* 235/10.

⁷⁸ Article 1(3) of the block exemptions states that some know-how licenses are, under certain circumstances, permissible, but they “may not exceed ten years from the date when the licensed product is first put on the market

products that are not based on the licensed technology. Know-how licenses should not result in the blocking of market entry with any reasonable substitute.⁷⁹

Interestingly, the Commission is considering to extend the scope of the block exemption to copyright licenses.⁸⁰ However, probably it will only prohibit certain clauses which limit the usage of non-copyrightable and non-secret information in technology transfer licenses – i.e. mainly in software licenses. Other types of licenses, for instance, those concerning literary works, will not be covered. Moreover, it may be doubtful whether cartel law is the appropriate place to deal with the above concerns. Cartel law essentially is about several parties concerting to undermine competition, whereas the issue here is that one party applies technology and contracts to enlarge just its own market power. Arguably, it may therefore be preferable to follow the precedent of the Software Directive and to prevent in copyright law itself that the rightholder is able to expand his market power by applying technology and contracts.⁸¹ It will, however, not be an easy task to draft a norm which prohibits clauses that inhibit the usage of non-copyrightable material and at the same time does not disallow the current practice of know-how licensing. A possible criterion to distinguish between permissible know-how licenses and prohibited copyright licenses could perhaps be the intended audience. If the information product is aimed at a larger public, and thus cannot be said to be secret, the term would be null and void.

Efficient Re-Use

The protection of technological measures may allow copyright owners to extract more income of next-generation creators in another way as well. Clearly, new digital technology has the potential to make more efficient the information production and to bring down its costs. A simple example is the copying and pasting of quotations from one document to another, which saves the time of typing them by hand. Technological measures may block such functions, thereby necessitating to revert to older, less efficient techniques. In *Universal v. Corley* a US Appellate Court held that there is no obligation under copyright law for the rightholder to enable exempted copying by the optimum method.⁸² Because the technological DVD-protection, which the Court considered protected under the US equivalent of Article 6 CD, does not hinder the ‘fair-user’ to record portions of video images by pointing a camera at a monitor while it displays a DVD movie, the Court felt that the US Copyright Act’s protection of technological measures does not impede the ‘fair-use’ of movies.

within the common market by one of the licensees”. Other types of know-how licenses may last longer, but only “as long as the know-how remains secret and substantial”. The proposed new Article 2 of the updated block exemption, see *supra* nt 77, states that it applies: “for as long as the intellectual property right on the licensed technology has not expired or been declared invalid or, in the case of know-how, remains secret, except in the event where the know-how becomes publicly known as a result of action by the licensee, in which case the exemption shall apply for the duration of the agreement.”

⁷⁹ Article 3(2) of the block exemption states that it does not apply to licenses by which “one party is restricted from competing within the common market with the other party, with undertakings connected with the other party or with other undertakings in respect of research and development, production, use or distribution of competing products”. The proposed new Article 4(1)(d), see *supra* nt 77, states that the block exemption will not apply if a license restricts a competing undertaking’s: “ability to exploit its own technology or [...] the ability of the parties to the agreement to carry out research and development, unless such latter restriction is indispensable to prevent the disclosure of the licensed know-how to third parties.” See also the proposed new Article 5(3).

⁸⁰ See Commission Evaluation Report on the Transfer of Technology Block Exemption Regulation N° 240/96 Technology Transfer Agreements Under Article 81, Comp/Reg. 240/96; see on the report R. Chahil, ‘Technology Transfer Regulation’, *Computer Law & Security Report* 2002, p. 318-321. See also *supra* nt 77.

⁸¹ See Heide 2000, *supra* nt 72, p. 224 ff; see also Ramello 2002, *supra* nt 72, p. 14: “The use of antitrust law to correct the conceptual errors of copyright is in fact an inefficient (and costly) way of proceeding, and leads to a schizophrenic system that on the one hand encourages certain behaviors while on the other hand it punishes them.” See also D.L. Burk & J.E. Cohen, ‘Fair Use Infrastructure for Rights Management Systems’, *Harvard Journal of Law & Technology* 2001, p. 67-68.

⁸² *Universal City Studios v. Eric Corley*, 273 F.3d 429, 459 (2d Cir. 2001); see also *United States v. Elcom, Ltd.*, 203 F. Supp. 2d 1111, 1131 (N.D. Cal. 2002).

The Court's interpretation of the law may be correct, but one may question whether, from an economic viewpoint, it is desirable that the more efficient digital quoting can be controlled by the rightholder. Perhaps he will supply versions of the work which allow electronic copying in quotations, but it is to be expected that such versions will be more expensive. In fact, if the user has to pay extra in order to perform exempted activities efficiently, the rightholder can grab a share of the efficiency gains of technological advance.⁸³ Other parties, like next-generation creators, may not benefit (equally) of the strides of technology, which could hamper the development of new products. Again, it appears that the established industries are favored. Admittedly, in the property right approach it is required that external effects are internalized, but the party who causes the effects should benefit of them, which in this case is the supplier of the technology and not the rightholder. In any case, as does US law, the protection of technological measures of the Copyright Directive may statutorily put a rightholder in the position to demand payment for efficient re-use, even though the use is expressly exempted under copyright law.⁸⁴

Price Discrimination

A pricing scheme in which versions that can be electronically copied cost more than those which cannot may be viewed as a form of price discrimination. The phenomenon of price discrimination receives a lot of attention lately of scholars discussing the economics of copyright law. Some commentators view price discrimination as the unifying concept of the economics of the information market.⁸⁵ Essentially, they argue that it may reconcile the approach in which all uses should, absent transaction costs, be excludable with the view that complete excludability is intrinsically undesirable, because information products are public, non-rival goods.

Price discrimination is applied if a seller charges different customers differently, while the price difference cannot be explained by a cost difference in supplying the product.⁸⁶ Perfect price discrimination allows an information supplier to serve every user exactly at the price that he is willing to pay. Therefore, low-value users can acquire the work at their (low) reservation price and, thus, non-rival usage would not be hindered and the social loss of the exclusion of information usage could be mitigated.⁸⁷ Consequently, if one regards the non-rival nature of information usage as the main rationale for the copyright limitations, perfect price discrimination may render those limitations obsolete. At the same time, the producer is able to recoup his investments by charging customers who are prepared to pay a higher price more. Concomitantly, the problems arising of the public good aspect of information products appear to be resolved completely. Price discrimination corresponds with the property right approach as well, because in order to apply price discrimination, the seller must contract with any user and agree on a different price with any user. The more usage is excludable, the more possibilities there are to price discriminate. Additionally, if an information producer can price discriminate, his market power no longer is problematic. Some market power even is necessary for a seller to apply a discriminating pricing scheme.

Compared to a seller who engages in price discrimination, an information producer who applies a single price loses potential customers and income. Those who find the price too high that he has to ask in order to recoup the development costs will not buy the product, while the

⁸³ Cf. Lunney 2001, *supra* nt 55, p. 900: “[T]he law allows copyright owners to claim a share of the value added to preexisting works by improvements in distribution technology.”

⁸⁴ Similarly, the producer of a database – technological measures applied to databases which are protected by the *sui generis* database right are covered by Article 6 CD – may demand payment for efficient re-use of non-substantial parts of the database. Of course, they can perhaps be copied in another way, but probably the more efficient electronic copying of non-substantial parts will cost the user more.

⁸⁵ See e.g. W.W. Fisher III, ‘Property and Contract on the Internet’, *Chicago-Kent Law Review* 1998, p. 1234-1240.

⁸⁶ M.J. Meurer, ‘Copyright Law and Price Discrimination’, *Cardozo Law Review* 2001, p. 56.

⁸⁷ This was first observed by H. Demsetz, ‘The Private Production of Public Goods’, *Journal of Law and Economics* 1970, p. 293.

seller could make money of any transaction which brings in more than the costs of producing an extra copy. Additionally, high-value users would be prepared to pay a higher price than the one the seller charges. In fact, under no other circumstances would a producer earn more than if he engages in price discrimination, while, at the same time, all consumers get what they want for the price that they are willing to pay.⁸⁸ In other words, a Pareto-optimum appears to be reached; no one can be better off. At first glance, therefore, the outcome has to be efficient. As will be shown below, however, not all scholars agree. Nevertheless, the Copyright Directive seems to encourage price discrimination.

Market Power and Arbitrage

Three conditions must be fulfilled for a seller to engage in price discrimination. First, he must have some market power, because if he does not, competitors can serve high-value customers at a lower price than he does. Obviously, that would hamper price discrimination. As is explained above, the Copyright Directive may confer such market power, even to a further extent than copyright law already did.

Second, the supplier must prevent so-called ‘arbitrage’. He has to have the ability to, for example, stop consumers to whom he sold the product at a lower price, from reselling it to consumers who value it more. The Directive supports this in several ways. Article 4(2) CD provides that the distribution right is not exhausted after the first sale of a copy, except if the copy is sold within the European Community. Thus, the rightholder can prevent the reselling of copies to the Community from countries which are not situated within it. Additionally, Article 3(3) CD states that the right is not exhausted after the on demand online distribution of file. Therefore, a market for second-hand products cannot evolve as it did for hard copies of works distributed offline. To resell a lawfully acquired file – or to give it away – the permission of the rightholder is needed.⁸⁹ Consequently, arbitrage is hindered.⁹⁰ Furthermore, Article 6 CD may protect technological measures which tie the use of work to a particular player. An example is Microsoft’s product activation scheme, which ensures that the same copy of a software product cannot be installed on another PC, without the rightholder’s permission.⁹¹ Similar mechanisms may be developed for other types of works.⁹² Clearly, if they become widespread, arbitrage will be a thing of the past. Since Article 6 CD may prohibit the circumvention of those systems, it may back discriminating pricing schemes.

Degrees of Price Discrimination

The third condition for price discrimination is that the seller can differentiate between high-value and low-value users. In this respect, three types – or degrees – of price discrimination are distinguished. In perfect or so-called ‘first-degree’ price discrimination, the provider can establish exactly what each individual buyer is willing to pay. Perfect price discrimination is considered to

⁸⁸ M.A. Einhorn, ‘Digital Rights Management and Access Protection: an Economic Analysis’, in: J.C. Ginsburg et al. (eds.), *Adjuncts and Alternatives to Copyright, ALAI Congress 2001*, NY: CopyCo Printing Inc. 2002, p. 89 ff.

⁸⁹ Probably, an important rationale for not applying the exhaustion rule to online distribution is that such distribution, at the current stage of technology, necessarily involves copying and that the right of reproduction was never affected by the exhaustion rule. However, DRM-systems are in development which may automatically delete a file from the sender’s hard drive, when he passes it on. If such techniques become widespread, this rationale no longer can justify to treat the online distribution of files differently from the offline distribution of hard-copies.

⁹⁰ The tendency to reduce the exhaustion of copyright may also be recognized in the Rental Directive of 1992, *supra* nt 18. Before this Directive was enacted, rental and lending of hard copies were in many European countries not covered by copyright law, because the right was considered to be exhausted after the first sale of a copy of a work.

⁹¹ See <http://www.microsoft.com/piracy/basics/activation>.

⁹² Microsoft’s rumored ‘Palladium’ initiative may constitute such a system. According to rumors spread over the internet, a key will be embedded in the computer’s hardware and all files will be encoded with that key. The files can be distributed further, but they cannot be decrypted – and thus not be used – on other computers, because they do not have the required unique key built in. Recently, the project has been renamed to ‘Next-Generation Secure Computing Base’ (NGSCB). See <http://www.microsoft.com/resources/ngscb/default.mspx>.

be unachievable in reality, because such perfect information on consumer preferences can never be obtained.

In second-degree price discrimination, the seller differentiates by changing the characteristics of the good. Consumers select themselves by choosing either a cheaper or a more expensive version of the product. An example is the delay by which low-value users are served with the cheaper paperback version of a book, while high-value users may at an earlier point in time acquire the more expensive hardcover edition. Another example may be found in the software market, where versions of a program in which certain features have been disabled are offered at a lower price than the ‘full’ version of the product.⁹³ Technological measures may enable a fine-grained form of second-degree price discriminations which comes close to perfect price discrimination. Suppliers may vary considerably in image and sound quality (bitrate). They may also offer versions which can be played one, two, three etc. times or versions which can be played just for a day and other, more expensive ones, that can be accessed much longer. The protection of technological measures of Article 6 CD which allows to control any usage of a work supports such pricing schemes. Additionally, they may be facilitated by the ‘right of temporary reproduction’ conferred by Articles 2 and 5(1) CD. To be accessed and used, a digitized work has to be temporarily copied – i.e. loaded – in a computer’s or media player’s random access memory. If the requirement of “independent economic significance” must be understood to imply that each loading of a work is an infringement if the user has to pay for each separate time a work is used, the provision clearly supports price discrimination.

In third-degree price discrimination the seller charges different categories of customers differently. Student discounts are an example. Also, the different prices that are applied in the various territories may be viewed as a species of third-degree price discrimination. By explicitly stating that copyright is only exhausted when a copy is lawfully distributed within the European Community, the Copyright Directive allows rightholders to charge different prices in different regions. If the technological region control mechanisms – e.g. those that are applied to films on DVD and to Sony Playstation games – are to be considered protected technological measures under Article 6 CD, the protection of technological measures may facilitate price discrimination by territory as well.⁹⁴

One could even think of a scenario in which the protection of technological measures allows to apply different prices in the various EU Member States. It may, for instance, be possible to technologically block the usage of a work on a PC which has any other language version of an operating system installed than – say – the Dutch version. Thus, rightholders could provide differently priced versions to the citizens of the different Member States. There is no apparent reason why mechanism like this would not be protected under Article 6 CD, which empowers to control *any* technologically blocked usage that is not authorized by the rightholder. The act of using a work on a computer with a non-Dutch operating system could be covered. Needless to say that, if the Copyright Directive actually protects such mechanisms, the Directive’s aim of promoting a single European market would be undermined.

Social Loss?

The Copyright Directive appears to encourage price discrimination in various ways. Many economists, however, are not convinced that price discrimination will have a positive impact. They stress that the merits of the phenomenon of price discrimination must be judged on the basis of the less than perfect forms of second and third-degree price discrimination, which are more likely to be applied in practice. It is generally accepted that price discrimination can only be

⁹³ See on the so-called ‘versioning’ of software C. Shapiro & H.R. Varian, *Information Rules*, Boston: Harvard Business School Press 1999, p. 91.

⁹⁴ A US lower court held that such systems, which prevent to play a game or a DVD on a player that is sold in another region than the content is, are protected under the US equivalent of Article 6 CD. See *Sony Computer Entertainment America, Inc. v. Gamemasters*, 87 F.Supp.2nd 976 (N.D. Cal., Nov. 4, 1999).

efficient, if it increases fulfilled demand and that the less than perfect types of price discrimination may, under many circumstances, reduce it.⁹⁵ Therefore, one should be cautious in predicting and generalizing the welfare effects of discriminating pricing schemes.⁹⁶

According to others, even perfect price discrimination may be doubted to advance social welfare. They argue that the costs of implementing discriminating pricing schemes – e.g. the costs of applying technological measures in order to prevent arbitrage and the costs of detecting consumer preferences – have to be included in the analysis. As those costs will be passed-on to end-users, the welfare loss of the exclusion of non-rival usage cannot be mitigated completely.⁹⁷ The lowest price will still be higher than the perfect market price. Furthermore, price discrimination may decrease output, because it may increase the costs of developing information products. It is likely that next-generation creators are willing to pay more than those who merely plan to ‘consume’ a work. If first-generation creators could identify those potential competitors, they could discriminate between the low-value end-users and the high-value second-generation creators. Of course, again, the higher costs of production would be passed-on and hamper more non-rival usage than would be the case in a perfect market.⁹⁸

In sum, it is far from established that price discrimination is the solution for all of the problems of the information market. Therefore, the Copyright Directive’s apparent endorsement of price discrimination may not be economically justifiable. What all commentators agree on, however, is that a seller who is able to price discriminate will earn more. A larger part of the surplus will find its way into his pockets.

Information Asymmetry

As is set-out above, there may be credible arguments for limiting the freedom of contract as regards the relation between a rightholder and a second-generation (potential) competitor. However, on the basis of the above, it is less clear whether the rightholder’s freedom to exclude uses by mere end-users – either technologically, by way of contract or on the basis of a combination of the two – should also be limited. Some commentators argue that there is no need to fear that the usage of information products will be blocked too extensively, because information sellers will compete by applying more attractive (less strict) use-restrictions. Market forces – freedom of contract – will match the demand for usage with the use-restrictions that rightholders will offer.⁹⁹

Others, however, assert that an information deficiency may occur in the relation between an information producer and an end-user. One of the requirements for the market to achieve maximum welfare is that the market participants are perfectly informed and never mistaken in the value of a good. If they misjudge that value, the price – and therefore demand and supply – will be too high or too low. This reasoning is often applied to standard form contracts. It is assumed that rationally behaving consumers will not read and compare the clauses of the different offerings, because the anticipated costs of comparing long and complicated contracts are higher than the expected benefits. The loss that the buyer may suffer of disadvantageous terms multiplied by the chance that the loss will actually occur is lower than the costs of studying the various contracts. Of course, a supplier who uses a standard form contract in many transactions has

⁹⁵ Meurer 2001, *supra* nt 86, p. 57-148; H.R. Varian, ‘Price Discrimination and Social Welfare’, *American Economic Review* 1985, p. 870-875; H.R. Varian, ‘Differential Pricing and Efficiency’ (1996), available at: <http://www.firstmonday.dk/issues/issue2/different>.

⁹⁶ See R.A. Posner, *Economic Analysis of Law*, New York: Aspen Law & Business 1998, p. 306.

⁹⁷ Y. Benkler, ‘An Unhurried View of Private Ordering in Information Transactions’, *Vanderbilt Law Review* 2000, p. 2072-2073.

⁹⁸ Boyle 2000, *supra* nt 68, p. 2031-2032.

⁹⁹ See e.g. Easterbrook 1996, *supra* nt 38, p. 215: “‘Better’ terms (as buyers see things) support higher prices, and sellers have as much reason to offer the terms consumers prefer (that is, the terms consumers find cost-justified) as to offer any other ingredient of their products.” See also Einhorn 2002, *supra* nt 88, p. 100.

ample reason to know in detail to what extent he is exonerated. Thus, not only is the buyer misinformed, which according to mainstream economic theory, may result in a welfare loss, there also is an information asymmetry – i.e. one party knows more than the other. The latter may aggravate the social loss, because the better informed party has the incentive to use his superior information strategically to his advantage.¹⁰⁰

Consumer Contracts

Along similar lines, it is argued that consumers will not take the trouble to examine the usage restrictions that DRM-systems enforce. Even if users have to scroll through a license before acquiring a work online, presumably, most of them will simply click the ‘agree’ button without taking notice of the terms of the license. Only after they have purchased a technologically protected work, will consumers find out which usage is blocked. According to some, this is a good enough reason to statutorily limit the usage restrictions that sellers may apply.¹⁰¹ But the argument goes on. If buyers do not take account of the restrictions, there is no reason for sellers to compete by hindering fewer uses technologically. Consequently, it is not to be expected that the price mechanism will balance the demand for uses and the technological usage restrictions. Reliance on market forces in the above mentioned sense may therefore not be substantiated. Additionally, if it is assumed that the rightholder has considerable market power, that alone may preclude competition.¹⁰²

Interestingly, while implementing the Copyright Directive, the German legislator inserted an obligation for rightholders who apply DRM-systems to make very clear which usage is restricted.¹⁰³ In the US, a bill which has a similar intent has been introduced in the Senate.¹⁰⁴ In the Copyright Directive a requirement to clarify beforehand which usage is blocked is lacking. But a – admittedly farfetched – reading of Article 6(4) CD could indicate that the framers of the Directive may have been aware of the problem. The provision states that the obligation to provide the means which enable exempted usage can only be overridden by “*agreed* contractual terms” (emphasis added). The requirement that the terms must be agreed upon may imply that standard form contracts are not enough to avoid the obligation. Only by negotiated contracts can the rightholder escape it. If bargaining has taken place, the usage restrictions may be presumed to be known to the parties. Then, there is no information asymmetry and therefore no reason to limit the freedom of contract.¹⁰⁵ Of course, the above interpretation of the Directive could only provide a solution for the few exemptions for which the Member States may introduce an obligation to facilitate them.

The German Act and the US bill can only have the desired effect, if the usage restrictions do not become overly complicated – e.g. if there are just two variations, like a version which can and another one which cannot be copied. If licenses become more cumbersome to understand, again rationally behaving consumers may not be inclined to read them and therefore will not

¹⁰⁰ Cooter & Ulen 2000, *supra* nt 6, p. 43.

¹⁰¹ Cohen 1998, *supra* nt 41, p. 488.

¹⁰² See Elkin-Koren 1998, *supra* nt 42, p. 1184; see also J.E. Cohen, ‘Copyright and the Perfect Curve’, *Vanderbilt Law Review* 2000, p. 1811-1812. Cohen argues that the view of price discrimination optimists and the one of those who assert that market forces will balance the offered use-restrictions with demand, which at first sight appear to be compatible, are in fact incompatible, because price discrimination implies that the seller has some market power and it is, therefore, not to be expected that competition will match the applied use-restrictions with demand.

¹⁰³ See the new Article 95d of the German Copyright Act.

¹⁰⁴ Digital Consumer Right to Know Act, 108th Congress, S 692.

¹⁰⁵ Recital 53 could support the conclusion that the Directive envisages bargaining to take place. It reads: “The protection of technological measures should ensure a secure environment for the provision of interactive on-demand services, in such a way that members of the public may access works or other subject-matter from a place and at a time individually chosen by them. Where such services are governed by contractual arrangements, the first and second subparagraphs of Article 6(4) [i.e. the obligation for the rightholder to facilitate exempted usage] should not apply. Non-interactive forms of online use should remain subject to those provisions.” The Directive requires interactivity for a rightholder to escape the obligation and interactivity may imply that negotiations take place.

compare the different offerings and misjudge their value. To cure the market failure, the legislator could prohibit technological usage restrictions, unless they have been explicitly negotiated for. Clearly, however, such a condition would increase the transaction costs, which, as is explained above, is to be avoided. A common argument in favor of standard form contracts is that they keep transaction costs down.¹⁰⁶ If one assumes that transaction costs inhibit bargaining, mass market licenses have to be permitted. However, it may then be recommendable to follow the precedent of the Directive on Unfair Terms in Consumer Contracts which lists presumably unfair clauses that Member States must declare non-binding.¹⁰⁷ Usage restrictions which consumers would never have agreed upon if they had known them and had equal bargaining power, would have to be disallowed. Of course, with regard to technological measures, it would not suffice to provide that certain terms are non-enforceable in court. DRM-systems enforce the terms of the license themselves. Therefore, a prohibition to technologically preclude certain uses would be necessary.

On the basis of the above, one can hardly argue that certain currently exempted uses may never be blocked. What matters is that the buyer knows in advance what exactly he is paying for – i.e. what he can and cannot do with the product. Nonetheless, Article 6(4) CD which permits Member States to insert an obligation for rightholders to facilitate usage covered by the private copying exemption may be understood in the light of the above. Until recently, many information products could be copied. Consumers may therefore expect that the possibility to copy is included in the price. If private copying is blocked without the consumer knowing that it is, he has bought a product which has less uses than he thought it would have when the contract was concluded. The product will then be overpriced. Perhaps in order to avoid such misjudgments, the Copyright Directive allows Member States to require that rightholders do not technologically hinder the home copying of hard copies and of information distributed through non-interactive services, like regular broadcasts.¹⁰⁸

Conclusion

By no means is the above analysis conclusive or exhaustive. It merely scratches the surface of the ongoing debate on the optimal level of control over information products. There are many more viewpoints, both stemming from economic theory as well as from other disciplines, which have not been dealt with. The issues could, for example, also be analyzed as regards the impact of the Copyright Directive on the freedom of expression and on the right to privacy of users. Moreover, it remains to be seen whether a conclusive economic analysis is at all feasible, among other things, because the various economic approaches to the problems of the information market result in contradictory conclusions as to the optimal degree of control. At this stage, it seems impossible to reconcile the different views.

If anything, the analysis shows that no definite answer can be given to the question whether the Copyright Directive will actually promote economic efficiency. However, assuming that the drafters of the Directive pursued economic goals, it may well be argued that they have overestimated the beneficial effects of both extensive property rights in information products and of freedom of contract in the information market. The apparent faith in the ‘invisible hand’ of the market may be unjustified. Particularly, the public good character of information products – i.e. the non-rival nature of information usage – appears to have been overlooked. Perhaps the

¹⁰⁶ Cooter & Ulen 2000, *supra* nt 6, p. 279; N. Elkin-Koren, ‘A Public-Regarding Approach to Contracting Over Copyrights’, in: R. Dreyfuss et al. (eds.), *Expanding the Boundaries of Intellectual Property*, Oxford: University Press 2001, p. 218-219.

¹⁰⁷ Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts, *OJ L* 95, 21.04.1993.

¹⁰⁸ See also Recital 51 of the Copyright Directive: “[Under certain circumstances] Member States should take appropriate measures to ensure that rightholders provide beneficiaries of such exceptions or limitations with appropriate means of benefiting from them, by modifying an implemented technological measure or by other means.”

Directive may be read to reflect the opinion that the problems arising of the public good nature of information products can be solved by encouraging price discrimination, it is, however, debatable whether price discrimination actually enhances efficiency. The provisions of the Directive may hinder competition to a further extent than copyright traditionally did, which could have an undesirable result as well. Additionally, the apparent reliance on market forces to match the demand for uses with the offered technological usage restrictions may be unsubstantiated. There may be valid arguments for limiting the freedom of contract and the freedom to block any usage technologically.

The net result of the Copyright Directive on social welfare is unclear, but the new legislation will likely enhance the revenues of the established information industries. This is due to three related consequences of the norms introduced by the Directive. First, rightholders now have the statutory ability to demand payment in more instances – for *any* usage a license is required. Second, they can hinder competition more often and thereby increase their market power. Third, they may apply price discrimination to a further extent. Additionally, the Directive may enable rightholders to appropriate a part of the efficiency gains that are caused by the strides of technology. Other parties may benefit less.

With this result in mind, one may question whether the Copyright Directive really strives for economic efficiency, as its recitals seem to suggest. It may perhaps better be explained by the so-called ‘public choice theory’. According to this theory, legislation reflects the interests of lobbying, rent-seeking parties, rather than a legislator’s aim to promote social welfare.¹⁰⁹ Indeed, as European Commissioner Bolkestein who supervised the drafting of the Copyright Directive noted, an “unprecedented lobbying onslaught” took place over the Directive.¹¹⁰ The above may suggest that the interests of the fiercely lobbying information industries prevailed.

Is the *droit d’auteur* passé? The recitals with the Copyright Directive may be read to imply that economic considerations have played an important part in drafting the Directive. Not the safeguarding of the reward to the author is the core aim of the Copyright Directive, instead it appears to strive for certain economic policy goals. However, the actual provisions of the Directive, particularly the protection of technological measures of Article 6 CD, may allow the rightholder to demand payment for any usage of his work. In fact, although the reasoning behind the two views is very different, the outcomes of the economic approach which emphasizes the beneficial effects of property rights – and which appears to be expressed in the Copyright Directive – and of the *droit d’auteur* view on copyright are very much the same. The Directive therefore fits well in the *droit d’auteur* perception which regards it to be a natural right for the author to fully harvest what he has sown. Therefore, it would be premature to speak of a paradigm shift in European copyright law.

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¹⁰⁹ See Van den Bergh 1998, *supra* nt 53, p. 18.

¹¹⁰ Statement of 14 February 2001, available at: http://europa.eu.int/comm/internal_market/en/intprop/news/01-210.htm.