

COPYRIGHT BEING WASHED AWAY THROUGH THE ELECTRONIC SIEVE

Some thoughts on the impending copyright crisis

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Copyright works are stored in electronically accessible data banks, presenting entirely new questions on the use of these works. People talk about making electrocopies of book pages. This article views electrocopies as a spectre from the paper era. We will have to develop completely new concepts for the use of the information speeding along the electronic highways and offered to users by various media.

The economic foundation of copyright has been a subject of much discussion for economists of law. In their treatises, the *raison d'être* of rights is sought in the economic efficiency of subjective rights. These subjective rights are counterproductive at certain times, efficient at others.² Other treatises are written in a more sociological vein, describing the slow but steady growth of the family of intellectual property rights as an autonomous process transpiring in the interaction between interested parties and legislative bodies.³

In this historical-futuristic treatise I have attempted to take a more macroeconomic approach, combined with the role played by technology. At this point in time, it cannot but be an overview of a number of hypotheses, which is why I will not include an extensive list of literature references.

¹ Chapter 3 of this article comprises an account of discussions with Bernt Hugenholtz. The author does, however, take full responsibility for the contents.

² R. Teijl and R.W. Holtzhauer, *De toenemende complexiteit van het intellectuele eigendomsrecht (The increasing complexity of intellectual property)*, Gouda Quint,(Arnhem 1991).

³ J.H. Spoor, *De gestage groei van het merk, werk, en uitvinding (The steady growth of brand, work and invention)*, W.E.J. Tjeenk Willink,(Zwolle 1990).

1 The Players: Emergence, Allocation and Exploitation of Rights.

In the paper society that did not manifest the characteristics of an information economy, copyright involved a well-delineated group of players and acts of exploitation. I would like to distinguish between works that exist in themselves (books, paintings) and works that only exist when they are performed (music, drama, dance).

To establish a copyright in the former category, the author creating the work only had to record it onto an irreplaceable information carrier (a manuscript) and take it to a publisher, who would 'wrap' the original, reproduce it as a consumable product (a book) and market it. The market was clear-cut, and the product was priced in relation to a quantifiable turnover with which both parties would obtain a profit margin based on the exploitation rights transferred by the author. Since the publisher played an important role in the distribution of the work, he immediately acquired a position of power over the author. Consequently, publication right emerged before copyright. In painting, this was different. The 'maker' produced a finished, unique, non-reproducible, wrapped (the framing of the picture) product for a wealthy group of insiders with whom he had a direct customer-commission relation, especially in the 15th-19th centuries. He brought the product onto the market himself (shop, customer). Although the publisher function hardly developed here, the art trade started taking on publishing and shop functions at a later stage.

This constellation yielded two properties characteristic of copyright. The owner of the copy of the work was free to do with it what he wanted, as long as this left the author's moral rights intact, i.e., as long as he respected the integrity of the work. Copyright was subservient to the unrestricted individual transfer of knowledge about the work to the work's owner. A second characteristic was that, economically speaking, the price for the copyright in the copy of the work was paid for the moment the copy of the work itself was paid for. This "exhausted" the copyright and further selling or use of the copy of the work could not be limited pursuant to copyright. Further selling and distribution became the responsibility of printers and booksellers, who, historically, often acted as publishers; later they became independent intermediaries on the buyer's market, as distinct from the publisher.

We will see how these two properties of copyright (exhaustion and unrestricted use by the lawful possessor of the copy of the work) gradually eroded. This development started with the distribution of knowledge that led to the division of the reading market into a buyer's and a lender's market; intermediaries in the latter market included public libraries. In painting, this secondary market did not emerge until the invention of reproduction technology; this resulted in the merger of pictures and text that gave the market for reproduction books its characteristics as a book market. Lending markets for original works appeared as late as the second half of the 20th century, in the form of art lending libraries as part of the government's stimulation policy (the market for originals had proved too inaccessible). A similar merger of pictures and text appeared later for book and film. Books are turned into films, and bestsellers are written with a view to being adapted for the screen. This will start a convergence process of printed and electronic media.

Despite certain differences between the various legal traditions, the relationship between publisher and author had always been one in which the author possessed all rights, which he would partially or wholly transfer to the publisher. This changed with the emergence of the information society, in which business and universities became important organizers of knowledge and creativity. This resulted in employer copyright (in The Netherlands: Section 7 of the Copyright Act), which is a good example of an economic solution. As explained in Coase's classic 1937 article 'The Nature of the Firm', the company assumes the transaction

risk from the individual (who must sell his work on the free market in which the shares of goods and services are determined by the price mechanisms) by employing him for wages (i.e. by internalizing the transaction into the company, as it were) and by integrating, at a permanent, periodical remuneration, the individual performance into a product the company attempts to sell to the market at its own risk.⁴ This solution was more efficient than the individual transaction. It was, of course, also influenced by the development of the technology for the manufacture of complex products that requires individuals with different kinds of expertise. In that respect, employer copyright ran parallel to the industrial revolution. Universities did not succeed in internalizing the transaction risk, because of past and present objections of principle to employer copyright⁵, which was presumably the upshot of the fact that universities had become lodged between the individual literary copyright tradition and the more business-like exploitation of knowledge.

Universities continued to trade in the intellectual prestige of individuals, which stirred up antagonism between publishers and universities. Universities found out that the authors they employed sold the rights to their works to publishers, which meant that, within the scientific cycle, universities had to pay again for the (re)use of information that had been generated at their expense in the first place (reader and reproduction compensation, and lately also the lending fees). As a result, universities attempted to commandeer part of the publishing function, a phenomenon clearly manifest in the United States, where each university has its own publishing firm (which subsequently became independent enterprises, but that is a different story).

A great deal more could be said about this development, but I will move on to the second category.

From the outset, the works that only exist when they are performed were distinctive in that they involved a different market mechanism and a different form of exploitation. The producer of the work was an essential link in the exploitation chain. Exploitation required a theatre, a theatre company or orchestra, business managers and artistic leaders, etc. This gave the producers-intermediaries a strong legal position, with their own rights, or rights derived from the author, to exploit the performances. There is a direct line from the position of the theatres to the film rights of film 'makers' (45 a of the Dutch Copyright Act), who eventually amassed all exploitation rights. Here, too, we see the development toward internalizing the individual authors' transactions within a larger organization, and the transfer of the collective exploitation risk of the work to the producer. Since these works are one-off, the employment relations are only partly suited to realize this transfer, thus requiring transfers linked to specific performances by means of legal assignment (e.g., a film score). The exhaustion principle has never applied in the performance branch, as the first Coditel decision by the HvJEG so clearly demonstrated: a performance (*in casu* a film broadcast on television) is not put into circulation to be 'exhausted', but is 'made available to the public by way of the unlimited repeatability of performances.'⁶ This has major consequences for exploitation. If the exploitation proceeds for a single-copy work are obtained by adding up a limited number of copies sold, for a work consisting of an unlimited number of repeatable performances it is

⁴ R.H. Coase, in: *The Firm, the market and the law*, The University of Chicago Press, (Chicago and London 1988), 33.

⁵ Spoor-Verkade, *Auteursrecht [Copyright]*, Kluwer (Deventer 1993), 38-40.

⁶ HvJEG (European Court of Justice), 18 March 1980, case 62/79 (Coditel I), recital 12.

necessary to regularly measure and pay for the number of performances. This led to the emergence of a different kind of intermediary, the copyright agency, which has its own, legally established authorities to settle the performances with the performing parties every year. This introduces a different kind of collective efficiency to copyright than the employer's and film author's right. Collective sums of money are settled collectively through contracts with major performers, which sums are transferred to the entitled parties in conformity with certain rough criteria. Because copyright was confronted with the problem of potential massive infringement relatively early in the industrialization process (a large number of illegal performances), the need for a collective form of action arose much earlier than for, say, product liability (a different kind of massive injustice generated by industrialized society). Incidentally, this only holds true for music; theatre performances are apparently sufficiently easy to trace for the entitled party to be able to keep an eye on it. This seems to be true for film as well. It was not until the appearance of the small-scale video that the need for collective action arose. Conversely, artists and music producers become powerful market parties at a later stage, wanting to keep exploitation away from the music collection agencies. A process of decollectivization occurs.

The individual, unrestricted use of works is subject to the same conditions as that of paper information carriers. Only performances in private circles are allowed. In this case, the criteria for permitted use are found in the private nature of the performance.

In the paper society, we see that there are various forms of exploitation, various collective legal relations, and various intermediaries for various types of work. We observe reproduction markets and performance markets with corresponding reproduction and performance rights. However, the electronic era will dramatically change this structure.

2 The Electronic Sieve

Users started reproducing works on which the copyright was 'exhausted' or which were freely available by means of a combination of old technology with which information is recorded onto material information carriers and new chemical and electromagnetic reproduction techniques. Photocopiers make paper copies of a paper information carrier. Audio and video signals that are publicized by playing a videotape or audiotape in a studio and broadcast by means of (ether or cable) radio and/or television links can be recorded with a video or audio recorder and copied onto a magnetic tape. The spoken words, images and sound of a copyright work started to 'drain away' through the copying equipment of users and intermediaries. The electronic sieve had been born, even though the drops that fell through still solidified to become material information carriers. This development put pressure on free private use. A legal decision illustrating this development is the Betamax case in the US about whether or not home taping of TV programmes was allowed.⁷ Applying the American fair use principle, the final decision favoured the consumer. The private use of paper information carriers was also put under pressure. Photocopying a paper information carrier was limited to making a few copies for study purposes and private use (16b Dutch Copyright Act), but that was not all. As it became possible to make photocopies of paper information carriers on a large scale, it became necessary to institute an intermediary, similar to that of music agencies for musical performances. In the Netherlands, this intermediary became the

⁷ Sony Corp. of America v. Universal Studios Inc. 464 US 417, 78, L. Ed. 2d 574 (1984).

'Stichting Reprerecht' (Reproduction Rights Foundation) which had the task of tracing all individual acts of copying not covered by allowed private use that occurred within a certain time period, to settle with these users and transfer the proceeds to the entitled parties. This was, of course, an impossible task: counting the drops.

It is now time to bring up some questions concerning reproduction right. Isn't it strange that a collection agency is established to start collecting the fees for use of a copy of a work on which the copyright is 'exhausted'? Should the exhaustion principle still be applied in that case, or rather: is there any difference between a work that exists in itself and a work that exists through performance only? Isn't it strange that private copying is restricted, while the use of a copy of the work is still allowed? Can we have been confused by the fact that the copying of the paper work yielded just as many paper 'reproductions', because we have learnt to think along the lines of that concept in copyright terms? Couldn't a photocopy simply be a performance of the work? But let's leave these questions for a while and concentrate on the development of the sieve for now.

The emergence of the computer marks the beginning of the end for the paper information carrier, or rather: the emergence of a new, electronic information carrier that will eventually take over most of the function of the paper information carrier. Copyright was faced with the question of how this information processor could be incorporated into law. From the point of view of exploitation, the question was whether processing of information in a machine (which is, in point of fact, a process of constant electronic copying) could be considered reproduction. The Software Guideline includes 'technical' reproduction in acts of exploitation.⁸ This is a new development as far as records and CDs are concerned; as far as I know, the mechanical copying acts taking place when these are played have never resulted in a debate on principles. Thus we have basically abandoned the principle of free private use. Paper is no longer required to record information in or outside a computer. In the computer is a hard disk, outside it the floppy disk. The information can be retrieved on screen an unlimited number of times. A hard copy is only one of the many different ways the stored information can be made visible. The difference between original and copy becomes blurred, because the information (in the form of bits) can be manipulated without restrictions. The drops entering the sieve have fallen from a large cloud, condense briefly and immediately evaporate into a new cloud.

A second phase in this development (which we are in the middle of) is the connection of the computer to a network with which information can be transmitted between computers over long distances (worldwide, e.g. the Internet). Thus the information is available in a publicly accessible computer, so that it can be consulted and copied from anywhere in the world. This is referred to as electronic document delivery. Is this in any way related to the old-fashioned method of copying? This question was thoroughly discussed during the amendment of Dutch reproduction law. Urged on by publishers, the 'electronic copy' has been deleted from reproduction law. An interesting point of the discussion was that the advocates of that measure continue to think in terms of paper information carriers: 'It presents new and serious threats for printed publication as a source, threats that are difficult to keep track of. The regular exploitation of written documents, as protected under Section 9 Berne Convention could suffer from this development.'⁹

⁸ For this controversy, see also E.J. Dommering, Reverse Engineering: a software puzzle, in: H.W.K. Kaspersen and A. Oskamp, eds., *Amongst Friends in Computer and Law*, Kluwer Computer Law Series 8, (Deventer Boston 1990), 32; Spoor-Verkade, *op. cit.*, 102.

⁹ N.v. Lingen, Reprerecht in revisie (reproduction law under revision), (1993) 7 *Informatierecht/AMI*,

With the virtual disappearance of paper information carriers (which have become by-products), we have to repeat the previous question in a rhetorical sense: hasn't the notion of the difference between the work that exists in itself (and can be copied) and the work that exists only in its being performed (and can be performed for an unlimited number of times) become obsolete? Doesn't the merger of image, spoken word and sound on a technical digital level (all these zeroes and ones, with image having more zeroes and ones than text) have ramifications for our concept of exploitation?

I would like to answer that question in the affirmative, but that was already implicit from the fact that the question was rhetorical. What is the difference between the 'playability' of a music CD and the 'retrievability' on screen of a text on disk? For the proponents of other solutions for the electronic copy in reproduction law, the paper spectre also continues to play a role: they continue to talk about pages of originals, and electrocopies and electronic copying.¹⁰ Has the thought ever occurred to us to consider a film image of a film that is broadcast on our television screen as an electrocopy of a film image on a rotating film reel that is being transmitted at that same moment? Or: has the thought ever occurred to us to find the basis for compensation for airing of a film in the number of 'electrocoped' images? I believe that multimedia thinking means that, for copyright, we must abandon the distinction between *performance* and *reproduction* as principally differing categories; as far as computer networks are concerned, we must start to think in terms of the performance of stored information: in image, sound or text. This primarily means that we must abandon 'repro-thinking' as outdated paper-thinking.¹¹

I will try to explain some of the consequences of this process.

132-133; see also M.J. Frequin, *De ontwikkelingen van de informatietechnologie en het reprorecht* (Developments in information technology and reproduction law), (1993) 3 *Computerrecht*, 97.

¹⁰ D.J.G. Visser, *De elektronische kopie en het reprorecht* (The electronic copy and reproduction right), (1993) 1 *Computerrecht*, 7 ff; Thomas K. Dreier, *Copyright in the age of electrocopying*, (1994) 1 *Informatierecht/AMI*, 3 ff.

¹¹ Referring to others not specifically named, Nicholas Higham talks about a 'diffusion right' for point to point, or point to multipoint transmission, *The new challenges of Digitisation*, (1993) 10 *EIPR*, 356; Cf. also Paul Geller, *The Universal Electronic Archive: Issues in International Copyright*, (1994) 25 *IIC* 1, 58.

3 The Electronic Sieve: New Relations

Exploitation concepts for broadcasting networks

Approaching the network not from the paper information carrier based on 'repro-thinking', but from the side of '(electronic) performance thinking', it is only logical to explore the legal development of radio and television. After all, this is an electronic network with which copyright has long-standing experience, and for which copyright has been based on performances from the very beginning.

There are a number of phases in that development. The first phase concerns the performance of works transmitted by radio or television. Based on Section 11 bis Berne Convention, these are considered as new publications by the original broadcaster and everything that belongs to it (*organisme d'origine*). Copyright fees are settled with the original transmitting parties (the broadcasting organizations). Because of the 'lighthouse effect' that occurs when distribution is diffuse (the beam of light from the lighthouse that, in classical treatises on the economics of law, is presented as the collective good that cannot be exclusively exploited), broadcasting corporations cannot pass on the copyright costs to individuals. As often occurs with payment of collective goods, they have therefore opted for a *fiscal* solution: a protective levy for the individual user, the TV and Radio licence fee.

As regards the user, the question of whether the audio or video presentation of a programme using a private receiving station yielded a new copyright-relevant performance was answered on the basis of the criterion of whether that performance took place *in private*.¹²

Subsequently, new networks appeared on the horizon: transmission by cable, better known as cable television. These cable networks were linked to the wireless broadcasting network.

With regard to the cable that receives a programme and transports it, the question was whether that cable belonged to the *organisme d'origine*. Like many other judges in Europe, the Dutch Supreme Court answered this question in the negative.¹³ This decision can be translated into a *system of collective licences for secondary exploitation acts*, with two opposing parties: the broadcasting organizations and music collection organizations versus the organized cable operators, who could charge the costs to their subscribers, with whom they have individual contracts. Here, too, the private circle question was raised. Did this regulation also apply to a smaller cable network (< 100 subscribers)? The legal framework, particularly Section 12 of the Dutch Copyright Act was, in the opinion of the Supreme Court, insufficient. The Supreme Court referred the case to the legislator for settlement, if necessary by means of a *coercive licence* based on Section 17a of the Dutch Copyright Act.¹⁴

The next step was that technology enabled settlement of fees with the users for services rendered: subscription television. This *technological* development still has a *collective* character, because subscribers subscribe to a supply of programmes, which they receive in the form of a coded signal that is decoded at home. Subscribers pay a fixed monthly sum to purchase that coded package. A new provision in the network will allow *pay per view* (PAYTV) in the near future.

The final phase in the development is the installation of a worldwide super-network in the

¹² See for law of precedent, Spoor-Verkade *op. cit.*, 171-172.

¹³ See for law of precedent, Spoor-Verkade *op. cit.*, 176-179.

¹⁴ Supreme Court 24 December 1993, (1994) 4 *Informatierecht/AMI*, 66.

form of satellite systems superimposed on the ether and cable network. In this respect, the EU has opted for *injection right*: the party injecting the programmes into the network is responsible for all other exploitation acts occurring on the network.¹⁵

The new multimedia networks

As may be clear from the above, the electronic broadcasting network employs a combined approach towards exploitation rights. Settlement based on secondary exploitation rights by means of collective or individual licences is but one of the solutions, that will only be opted for when there are well-defined exploitation moments and tangible parties. This demonstrates how one-sidedly the concept of information network exploitation is approached. Because people still think it involves putting a book into the computer, they persist in the notion of secondary exploitation acts related to (pages of) the book, rendering the exploitation of a network more and more difficult and expensive. Repro-thinking should make way for network-thinking.

In this shift to network-thinking, we should not forget that an information network differs from a broadcasting network. The exploitation of broadcasting network is a form of centralized editing and dissemination of information to homogenous audiences. The exploitation of a multimedia network is much more complex because heterogeneous users purchase different amounts and different kinds of information at different times. A wide variety (variety in technology, target groups, information services to be rendered) of networks is linked together. The line between private and public use within the network is even more difficult to determine than for broadcasting. This only goes to show how important it is that we search for a mix of exploitation modalities, depending on social and technical possibilities. Electrocopy licensing is not the most appropriate solution, because drops of water cannot be counted, and evaporate to boot. A technological solution that allows individualizable use by means of encryption techniques (in the stored information, for access to data banks, for transmission) could become of paramount importance. Copyright might become a part of the complicated telecommunications accounting systems. Some envisage a future in which the consumer will pay for all his or her multimedia services (i.e. the telecommunications part and the use of information) a monthly account like we now do for the gas and electricity utilities.

The new, more complex situation will result in different alliances and actors and the concomitant changed allocation of rights and pricing of exploitation.

Different alliances, different allocation of rights.

In the previous paragraphs, I have briefly discussed how the different forms of exploitation of the different categories of works result in differing players in the field. The multimedia development concerning public networks stimulates the formation of combinations of telecommunications, media and cable companies in an attempt to gain control of the entire package to supply *video on demand* services to users. Similar developments are involved

¹⁵ P.B. Hugenholz, De Europese richtlijn inzake satellietomroep en kabeldoorgifte (The European directive on satellite broadcasting and cable transmission), (1994) 5 *Informatierecht/AMI*, 87-90.

Fout! Verwijzingsbron niet gevonden

where the formation of information networks is concerned. Publishers will also start organizing themselves on a multimedia level in order to control the multimedia exploitation rights: to the traditional book, the CD-ROM, the electronic data bank, the paper and electronic magazine, scenario rights for video and audio adaptations of the text for distance learning, etc.

The question remains of whether other players on the market will agree to it. After all, the new intermediaries are data banks who, in playing a role in opening up the networks, will carry out as important a performance task as the old theatre and film producers. And will the universities that have the information generated take a passive stance in the new situation? I don't think so: they will continue to wonder what price they themselves have paid for the generation of information and what price publishers pay for it. And we should not forget that the government is also producing more and more exploitable information. The government is starting to take an entrepreneurial viewpoint towards its products and wants to be paid for these.

It is conceivable, therefore, that there will be a new power struggle on the allocation of rights, in which the producers of knowledge try to achieve rights, either in the form of employers copyrights or otherwise. The same holds true for intermediaries like libraries. The more added value their intermediary function gets, and the more they are bogged down by all secondary exploitation rights publishers throw at them, the more consideration they will give to their position of power in the process of information provision. It is also high time that authors start thinking about whom they will assign which electronic performance rights and at what price, and in what constellation they will have the best negotiating position. Publishers will reconsider their past and present position. As usually happens when a revolution in market relations occurs as a result of economic and technological transformation, vertical integrational movements cannot be ruled out. This is illustrated by the purchase of cinema chains in the film industry, or in the book trade. This development is sometimes followed by separation spurred on by the need for independent intermediaries. The separation of the printed press and publishers has been partly completed; once this product cycle is started, will information producers or publishers and telecommunications and information companies become involved in the same integration process as is currently developing in the film industry?

And what will be the position of the collecting societies? Suppose pay per use and individual repartition will become a reality, will we still need collecting societies with exclusive rights. Wouldn't it be more efficient when agencies on a competitive basis or right owners would take over the role of these intermediaries?

Price and free use

Multimedia exploitation right involves a different pricing system than rights to works exploited through one single medium. Just like the legal regulations of the old medium can, ultimately, not be transformed to the electronic network simply because the information is entered into the network as text, image or sound, it is important that the pricing rules for the old media be abandoned. Broadcasting companies take the size of the public to which the network is accessible as a criterion (cable operators, for instance, pay in accordance with the number of subscribers). A similar system could be used for text, possibly in combination with collective subscription systems and *pay per use* systems.

I have no cut-and-dried answers at this stage. All I want to do is point out that the entire pricing system must be reviewed and that electrocopying is a notion that must be abandoned.

The multimedia network requires a different approach and the development of new criteria for free use. After all, the object of copyright is not only to protect the author's intellectual efforts, but also the distribution of knowledge. One of the serious threats of the new technologies is that it could give to the right owners a dominant position to control the flow of information from the input in the databases, through the network to the site of the end users.

4 Conclusion: the Electronic Tower of Babel

The electronic network not only confronts us with problems concerning copyright and the economy of this new medium, it is also linked with questions concerning privacy and freedom of expression. Paul Geller distinguishes between three different legal levels of protection in that network.¹⁶ Privacy rights at the basic level, contract rights at the second level, and copyright at the third level. I tend to think that it concerns conflicting claims: copyright would benefit from *pay per use* systems, but this may conflict with the privacy claims aimed at anonymity of the individual user. Centralized control over reproduction and performance also conflicts with the right of freedom of expression. This might mean level upon level of protection, so that settlement codes will not reveal the identity of individuals. And too much encryption in turn conflicts with the government's wish to monitor a suspected offence. The multimedia network calls for an integral approach so that problems of copyright, privacy and freedom of expression are addressed at the same time. The new electronic information highway should be governed by *information law*.¹⁷

It is not just that the electronic network will consist of a labyrinth of secret languages for reasons of legal protection, it also is a melting pot of nationalities. What national law will apply to those information relations? The information law of the international super highway has to be an international law. In short, it is a grand and extremely complicated construction. Will the electronic highway end up as the tower of Babel, which could not be completed; not due to a lack of technical ingenuity, but due to a confusion of tongues?

And what is more: will cyberspace be as enlightened a society as the Republic of Letters of the eighteenth century that invented copyright and freedom of expression?¹⁸

¹⁶ Paul Geller *op. cit.* note 11, 60.

¹⁷ See Egbert Dommering, An Introduction to Information Law, in: Egbert Dommering and Bernt Hugenholtz eds., *Protecting Works of Fact*, Kluwer (Deventer Boston 1991), 10-28.

¹⁸ See Paul Geller, Copyright between Market Place and Authorship, in Brad Sherman and Alain Strowel eds., *Of Authors and Origins*, Clarendon Press (Oxford 1994), 161-164.