

Ethics and Law of
Intellectual Property

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Current Problems
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Edited by

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Chapter 11

Knowledge and Information – Private Property or Common Good? A Global Perspective

Rainer Kuhlen

Introduction

Central to this chapter is the controversy over how far knowledge and information should be primarily an object of development (in the public interest) or an object of commercial exploitation (in the interest of private people). In this vein, the fundamental question “who owns knowledge” is addressed. This chapter also discusses whether the hypothesis of the “tragedy of the commons” can justifiably apply to knowledge and information. We do not think so. The expansion of intellectual property regulations (IPR) worldwide is highlighted, including its critical aspects. Some of the current worldwide dominant arenas are analyzed with respect to the question whether knowledge and information should be public or private property: the WTO, in particular the TRIPS contract, in the framework of GATT and GATS; WIPO with its current debate on a Development Agenda; WSIS with new strategies for a Digital Solidarity Fund and for Internet Governance, with consequences for an IPR regime; UNESCO with its recent Convention for the Protection and Advancement of Cultural Diversity. This chapter also addresses the current amendment of copyright law in Germany and focuses on its consequences for education and science and the provision of information through libraries. The demand for an economically driven information society, in particular when supported by politics (law) and by GATS, does present a threat to the libraries’ ability and mission to provide information and documents for the public. Finally, a suggestion is made on how the classical three-step test of copyright law, which is increasingly becoming overly restrictive and counter-productive, even for the economy, can be replaced in the public interest by a reversed test which is more appropriate for the electronic environment and a development agenda.

Who owns knowledge?

The conflict regarding which conditions lead us to view knowledge and information as public or private property has become increasingly heated in recent years. The reason for this is obvious: knowledge and information are decisive resources for

development of any nature, be it personal, scientific, social, economic or political. This is what defines the information and knowledge society. The following questions are raised accordingly:¹

Who owns knowledge and information, who can access knowledge, who can use knowledge for what purposes? Who should and who may make knowledge public as information products?

No other element of our social order seems to be more unclear than the concept of "intellectual property". The liberal idea of possession of (material) property and its fundamental relevance for the development of civil society and free economy has been directly and mostly without any further consideration transferred to property objects of an immaterial nature.

For this reason, the history of the last two hundred years and in particular of the last twenty years is also the history of progressive privatization and commercialization of knowledge and information, that is, the conversion of public property to private property. As private property it dominates the markets. Information markets are currently the driving power of the economy in general, both because information is increasingly important for all types of industry production and for all services – investments in information are at least as high as those in labor, raw materials and operations in practically all branches – and because knowledge and information are directly traded as information products on commercial markets.

However, counter movements are not to be ignored. Doubts with regard to even the validity of the term "intellectual property" are on the increase.² Thus, sections of civil society, in particular from the free software and human rights movement, attempt to avoid the expression "intellectual property rights" in the debates, for instance at the World Summit on the Information Society (WSIS) and to instead highlight the developmental potential of intellectual works rather than the ownership and the right to exploitation.

One can indeed speak of a Renaissance of the idea of the "commons", in which knowledge and information are an example of public property. This explains the intensity of the conflict regarding knowledge and information in the present day. The positions have radicalized precisely because of the progressive digitalization of all objects and processes of the intellectual world we "live in" (in our *Lebenswelt*). On one hand, the procedures to protect knowledge and information (in the technical and legal sense) have intensified. On the other hand, it is precisely the electronic space

1 R. Kuhlen, "Universal Access – Wem gehört Wissen?", in A. Poltermann (ed.), *Gut zu Wissen. Links zur Wissensgesellschaft* (Muenster: Verlag Westfaelisches Dampfboot, 2002), pp. 164–197.

2 T. Hoeren, "Urheberrecht und Verbraucherschutz: Überlegungen zum Gesetz über Urheberrecht in der Informationsgesellschaft", *Arbeitsberichte zum Informations-, Telekommunikations- und Medienrecht*, vol. 10 (Muenster: LIT Verlag, 2003); J. Boyle, "The Second Enclosure Movement and the Construction of the Public Domain", *Law and Contemporary Problems* 66 (1, 2) (2003), pp. 33–74; L. Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity* (New York: Penguin, 2004).

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that provides the potential to make knowledge and information freely accessible and usable for everyone.

Can the "tragedy of the commons" also be applied to knowledge and information?

According to the prevailing opinion of the economic sciences, a restoration of knowledge and information to the domain of public property would mean that a successful high-yielding exploitation of knowledge and information would no longer be possible. To put it another way: should a commodity be completely seen as a public commodity, as part of the "common", its destruction is thereby virtually pre-programmed. This premise was justified for a long time with the hypothesis of the "tragedy of the commons".³

This hypothesis ("Freedom in a common brings ruin to all" – Garret Hardin) means that public commodities would be overused and then destroyed if they were available for the free use of all. This could only be prevented by transferring them to private property, which would ensure that these commodities would be in sufficiently short supply in the interests of their long-term use and exploitation, so that they could regenerate and further yield profit. In addition, public control (by government regulation) could, according to the hypothesis, prevent over-use of public commodities. Today, the leading schools of economics prefer the market answer to the tragedy thread.

However, this hypothesis, particularly when applied to the "common" knowledge and information has recently been the subject of harsh criticism.⁴ Intellectual works, especially in their digital form, are commodities which, unlike material commodities, are not consumed in use, but rather gain value through their use and can at least continuously create new uses. They are therefore considered to be *non-rival* (and in principle also non-excludable) in their use – one use does not affect another use. Millions of users can have access to an electronic server or to a public website without negatively impacting each other. Furthermore, considerable (technical and legal) efforts and enforcement are necessary to exclude users from such commodities, especially when these are available in digital form.

The main conclusion that economics and politics nevertheless draw from the "tragedy of the commons" hypothesis (namely to privatize and thereby limit availability), is a situation where, without private incentives to gain profit from existing products, no new knowledge and no new information products would be created.

3 G. Hardin, "The Tragedy of the Commons", *Science* 162 (1968), pp. 1243–1248.

4 Boyle, "The Second Enclosure Movement and the Construction of the Public Domain"; C. Hess, E. Ostrom, "Artifacts, Facilities and Content: Information as Common-Pool Resource", paper presented at the Conference on the Public Domain, Duke Law School, Durham, North Carolina, November 9–11, 2001, pp. 44–79; Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity*.

Protection of private property in the public interest?

This line of argument is followed by legislators worldwide: that, on the one hand, privatization and limited availability is the only possible way to create sufficient incentives for new development. On the other hand, only through privatization and limited availability can the part of information economics vital for the political economy be sustained or further developed.

Clearly the first argument for protection does not apply for all production of knowledge and information. In science, widely financed by public resources, the incentive for productivity is not driven directly by monetary recognition, but rather by a quest for reputation or the sheer curiosity of discovering something new and the satisfaction of being able to share this new knowledge with others.

Further, the aim of being able to take note of newly produced knowledge by making this knowledge public does not have to necessarily conform to commercial forms of management in an electronic environment. Workable models to publicize immaterial commodities without intent of commercial exploitation have been developed (similar to open access usage) that also incorporate the traditional quality assurance provided by science in the past.⁵

Combining scientific production with the protection of its commercial exploitation therefore hardly makes any sense in an electronic environment. In fact, we can recognize more than just initial indications that state funding and support programs aim to push forward the open access approach and no longer leave informational safeguards in education and science exclusively to their fate on the markets.

In the general public markets, in which we include the media of the broadcasting services or the entertainment industry, the picture is somewhat different. Authors/originators/artists primarily produce their intellectual or cultural objects simply because they are creative, but they very often have no alternative source of income to secure their livelihood and are therefore dependent on receiving monetary recognition for their work. In culture there is a clear responsibility on the part of the state to protect the rights of the creative artists to their work. However, this does not necessarily mean the protection of the rights of commercial exploitation through a third party, at least not when this protection results in business and organizational models for exploitation no longer being appropriate for the electronic environment, and the public being restricted in access to cultural objects.

Counter measures

The information industry is resisting the newly recognizable perspective of re-transformation of private commodities to the public domain, not only with theoretical arguments (tragedy of the commons), but primarily with practical (technical and legal) measures.

⁵ H. Andermann, "Entwicklung von alternativen Publikationsstrukturen in Europa und den USA", *Bibliotheksdienst* 37(6) (2003), pp. 731–739.

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Considering the defensive strategies of the technical measures (for example, copy protection, in general all forms of digital rights management – DRM)⁶ against “abuse” by free reproduction and easy available distribution technology, we must conclude that these aggressively fought battles against uncontrolled free use of intellectual objects have yet neither been won, nor indeed can be won. This is primarily due to the fact that, on one hand, the costs for the enforcement of technical measures (DRM) have the effect of increasing the cost of transaction higher than that of open access and availability forms, meaning that a reasonable yield is no longer possible. On the other hand, consumer do not accept strict protection measures, and tend to abandon this type of protected product and turn to new products or new distribution procedures on the open markets or to file share and exchange services.⁷

Nevertheless, legal protection and regulation of intellectual property rights in the interest of the commercialization of all areas of science and information have been increasingly strengthened through the following measures, amongst others:

- temporal extension of the duration of international property rights (IPR) protection;
- extension of IPRs to living objects (knowledge about these) and occurrences in nature;
- attempts to extend IPRs to software (in a by all means still controversial debate);
- introduction of special *sui generis* regulations, for example, for databases (as a compilation of data of any particular nature which, according to the respective EU Database directive⁸ does not have to necessarily be IPR worthy itself) or for semi-conductor developments;
- reduction of originality claims and levels of standard requirements for intellectual work;
- extension of IPRs to new objects such as business models and procedures;
- intensification of global harmonization of international conventions such as WTO/TRIPS⁹ or WIPO requirements¹⁰ (with the consequence that IPR regulations were forced to be introduced in those countries where the concept of IPR was so far unknown, and which therefore scarcely had the infrastructure to secure IPR measures and where acceptance among the population was not to be expected);
- expansion of the exclusive publication/availability rights of the author/user;
- trends to diminish the exemptions (*Schranken*, that is, the restrictions of the exclusive publication/availability rights of the author/user), which have been

6 E. Becker et al. (eds), *Digital Rights Management: Technological, Economic, Legal and Political Aspects* (Berlin: Springer, 2003).

7 R. Kuhlen, “Napsterisierung und Venterisierung – Bausteine zu einer politischen Ökonomie des Wissens”, *PROKLA – Zeitschrift für kritische Sozialwissenschaft, Sonderheft Wissen und Eigentum im digitalen Zeitalter* 32(4) (2002), pp. 57–88.

8 Directive 96/9/EC of the European Parliament and the Council of March 11, 1996 on the legal protection of databases.

9 Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS).

10 WIPO Copyright Treaty; WIPO Performances and Phonograms Treaty.

incorporated in most copyright laws in favor of the public interest in education and science, but also for allowing private copies for one's own use and other exemptions;

- reinforcement of the protection mechanisms through technical procedures and, simultaneously, protection of these technical measures within the IPR laws against circumvention under threat of civil and criminal consequences.

Global arenas

Globally, we can currently identify four main areas in which new behavioral forms, new legal regulations and new organizational models for contact with knowledge and information are being developed:

1. WTO (World Trade Organization) with TRIPS (Trade-Related Aspects of Intellectual Property Rights), initially in the framework of GATT (General Agreement on Tariffs and Trade), and now increasingly looking towards GATS (General Agreement on Trade and Services), has the aim of accelerating the liberalization of world trade for information, media-based and cultural commodities of all natures and of fostering its importance on the markets and the information markets by protecting intellectual property rights.
2. WIPO (World Intellectual Property Organization), a UN organization entrusted with the task of providing valid regulations worldwide for handling of intellectual property, and is currently encouraged by countries like Brazil and Argentina, in the process of refocusing on the developmental potential of intellectual works instead of solely concentrating on the protection of intellectual property.
3. WSIS, the UN World Summit for the Information Society, whose first stage took place in 2003 in Geneva and was finalized in 2005 in Tunisia, attempted, among other aims, to develop a strategy to overcome "digital divides", for example, through a Digital Solidarity Fund and a new strategy for Internet Governance.
4. UNESCO, the UN organization for Education, Science, Culture and Communication, was finally successful (against the vote of the U.S.A. and Israel) in getting the Convention on the Protection and Advancement of Cultural Diversity adopted by the General Conference in Fall 2005 and thus attempted to find a counterbalance against the rigorous commercialization of cultural objects, including those related to knowledge and information.

Many additional international organizations are involved to a great extent in all of these arenas, for example, the IFLA, the international library association in the WSIS context, but also recently in the attempts of a re-organization of the WIPO by supporting the Geneva Declaration on the Future of the World Intellectual Property Organization.¹¹

¹¹ Available at <http://www.ifla.org/III/CLM/CLM-GenevaDeclaration2004.html>.

With respect to information, it is not to prevail without only representing in addition to the meetings and not always having which subject questions about civil society (non-rival and even exclusive counter-productive cultural, educational

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¹³ H... Medienpol... 001314.

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With respect to the general debate about the goods character of knowledge and information, it is particularly noteworthy that a *multi-stakeholder* approach seems to prevail worldwide, especially in the UN context. According to this approach, not only representatives from the private sector and from international organizations, in addition to the official government delegates, will be heard in inter-governmental meetings and committees, but groups from civil society as well. These groups do not always have direct involvement in decisions, but are involved in discussions in which subject-relevant arguments of specialists from civil society often influence questions about the information society. It is clear that the majority of people in civil society stand up for an expansion of the realm of the "commons", including (non-rival and non-excludable) knowledge and information, and view strong or even exclusive private control over knowledge and information as obstructive and counter-productive for development of any nature in all areas (individual, social, cultural, educational, scientific and also economic).

The impact of the WTO

The initiative and position of power for intellectual property regulations in the last ten years have been primarily occupied or at least initiated by the WTO,¹² in particular through the TRIPS agreements, which pushed forward the worldwide intensification of the protection of commercial exploitation interest under pressure from the demand for liberalization, commercialization and privatization, including that of knowledge and information. In the framework of the Doha round, and also within the GATS action, the service industries, including the information services, have been affected. GATS aims at full liberalization in 160 different service sectors.¹³ Only services with direct relevance to states' sovereignty and security are exempt. Services within the civil service are also affected, as are all music and audiovisual sectors (including radio and all music and film/video),¹⁴ training and information services and, in this way, libraries. Critically, information services in a broader sense highlight a dichotomy in the positions, which characterize the contradictions in the regulation of intellectual property.

There is a strong indication that strong IPR regulations regarding patent rights, but copyright as well, present a considerable barrier to overcoming the various manifestations of global North-South divides, as they protect existing privileges and user rights rather than making knowledge available for free development and, in this way, helping to overcome North-South divides.¹⁵

12 P. Wittgenstein, *Die digitale Agenda der neuen WIPO Verträge. Umsetzung in den USA und Europa unter besonderer Berücksichtigung der Musikindustrie*, dissertation (Zurich, 2000).

13 H. Brügger, "Liberalisierung der Dienstleistungen. Gefährliche Dynamik", *Medienpolitik* 2 (2005), available at <http://www.klartext.ch/detail.php?id=KT2005-04-20-001314>.

14 V. Wiedemann, "Gesamtziel: Vielfalt. Audiovisuelle Medien in den GATS Verhandlungen", *epd medien* 92 (November 23, 2002) pp. 3-38.

15 Report of the Commission on Intellectual Property Rights, *Integrating Intellectual Property Rights and Development Policy* (London: IPR, 2002).

Global, uniform directives for IPR regulations are not in the interest of all countries. Instead, much speaks for a dynamic, more flexible handling of IPR directives. This should involve consideration of the various political economies as well as differences in knowledge and information sectors. Weak IPR that allow the possibility of free copying and reverse engineering must be accepted for a controlled period of time and not defamed as piracy. Reverse engineering is the transfer of knowledge and not the theft of information products. Software patents promote monopolies, which inhibit innovation rather than innovative developments. Generous exemptions for exclusive exploitation rights are also necessary for areas of knowledge which are indispensable for the development of knowledge infrastructures, and for the social and political infrastructure of countries and thus for knowledge production (science and culture), which transfers to education, media and health in the broader sense.

UN World Summit for the Information Society (WSIS)

At WSIS II in Tunis in 2005, WSIS was not able or not willing to produce – let alone agree on – innovative solutions for the existing regulations for the protection of rights to intellectual works (in particular copyright and patent rights) in its final documents (Tunis Commitment and Tunis Agenda 2005). In Geneva at WSIS I in 2003, in the conclusion of the (first) WSIS Declaration a compromise formulation was found under paragraph 42 which, on the one hand, emphasizes incentive as a motive for the protection of intellectual works and as a condition for creativity and innovation but, on the other hand, recognizes the significance of broad (more open, more free) distribution and sharing of knowledge for exactly these processes of creativity and innovation:

Intellectual property protection is important to encourage innovation and creativity in the information society; similarly, the wide dissemination, diffusion, and sharing of knowledge is important to encourage innovation and creativity. Facilitating meaningful participation by all in intellectual property issues and knowledge sharing through full awareness and capacity building is a fundamental part of an inclusive Information Society.¹⁶

At WSIS II in Tunis in 2005, the concept of IPR, not to mention the challenge to reformulate the concept of intellectual “property” at all, was not even mentioned in the official documents. However, the basic question (posed by the UN-appointed Working Group for Internet Governance – WGIG – in its discussion about the extension of property rights also to intellectual electronic products) still remains whether “the greatest overall economic and social benefit will be achieved by simply extending the IPR rules developed for the off-line world into the very different ‘space’ created by the Internet, or whether achievement of these benefits in the ‘global information society’ will require significant modifications to the IPR regime” (WGIG, WG IPR).

On the one hand, the WSIS texts emphasize that development is dependent on access to knowledge and that the Internet holds the potential to expand this access for all, in particular for the developing countries. On the other hand, the interests of

¹⁶ WSIS I Declaration, para. 24.

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those who, in precisely the same electronic environment, can witness the constantly increasing economic significance of knowledge, need also be considered. WSIS was hardly in the position to dispel this tension by itself.¹⁷

A new alignment in WIPO?

WIPO is also involved in the international debate about the goods character of knowledge and information. What kind of a commodity are they? WIPO has primarily followed the parties in favor of strict IPR regulations in recent years and up to the present day¹⁸ and emphasized the importance of IP for economic growth.¹⁹ However, by the beginning of October 2004 at the latest, a revision of this previous policy can be detected in the WIPO. On October 4th at the general meeting of the WIPO, the suggestion made by Brazil and Argentina, and supported by many developing countries, regarding the establishment of a "Development Agenda for WIPO" was accepted.²⁰

The Development Agenda emphasizes that "development should be a central dimension in any negotiation involving IP systems". It queries the correctness of the policy, previously also represented by WIPO, that only strict IPR regulations can promote development:

It is important to promote a critical examination of the implications for developing countries of the adoption of increased IPR protection, rather than to seek to approach this highly controversial issue as if it were governed by absolute truths, solely under the one dimensional perspective of the private rights holders, ignoring the broader public interest. (no. 5 of the proposal)

Now, more than ever before, it has become clear that in the increasingly global, knowledge economy, access to knowledge and technology is indispensable for social and economic development and for the well-being of peoples in all countries. Consequently, any policies and international norm-setting, particularly in relation to intellectual property protection, which may have an impact on access to knowledge and technological development, pose a serious development concern for developing countries and LDCs. (no. 13 of the proposal)

The UNESCO Convention on Protection and Advancement of Cultural Diversity

As expected, the UNESCO Convention on Protection and Advancement of Cultural Diversity did not take an explicit position with regard to IPR issues. However, several

17 W. Kleinwächter, *Macht und Geld im Cyberspace. Wie der Weltgipfel zur Informationsgesellschaft (WSIS) die Weichen für die Zukunft stellt* (Hanover, 2004).

18 WIPO Copyright Treaty; WIPO Performances and Phonograms Treaty.

19 WIPO, *Intellectual Property – A Power Tool for Economic Growth* (2003), available at http://www.wipo.int/about-wipo/en/dgo/wipo_pub_888/index_wipo_pub_888.html.

20 Cf. J. Boyle, "Manifest on WIPO and the Future of Intellectual Property", *Duke Law and Technology Review* 9(8) (2004); also see *The Geneva Declaration on the Future of WIPO* (2004), available at <http://www.cptech.org/ip/wipo/genevadeclaration.html>.

UNESCO member countries, Switzerland in particular with the Berne Convention on Cultural Diversity and North-South Relations (June 2004) among others, are lobbying to have not only cultural production and the arts, but also the approaches and systems of rights of social groups, counted among public commodities. This does not necessarily disqualify the economic function of culture, but is intended²¹ to prevent culture from becoming entirely reduced to a trade commodity of commercial markets.²² Politically the relationship between the WTO and UNESCO is somewhat unclear, which therefore makes it problematic, as, in principle, the same governments are in fact responsible for the signing of WTO treaties and also for the ratification of the UNESCO Convention, binding under international law.²³ Therefore, it remains to be seen whether the WTO, with its strong economic interests, considers the UNESCO Convention to be compatible with the WTO treaties or whether it sees a fundamental conflict between the two international contracts. For example, the right of a state to take regulatory and financial measures to protect the cultural expression of its jurisdiction, under the Convention, could be interpreted by the WTO as conflicting with WTO regulations.

It will be one of the major challenges for UNESCO to transfer the central idea of the adopted Convention – namely, that public investment in cultural goods is not a bias in market activities, but is a necessary precaution in the public interest – to the general domain of IPR regulations.

Naturally, the legal relationship between both these treaties (UN-external WTO treaties and the UN-internal UNESCO Convention) is particularly controversial. Article 20 of the Convention attempts in a quasi-Salomonian fashion to regulate the relationship of the Convention to other treaties:

Article 20 – Relationship to other treaties: Mutual supportiveness, complementarity and nonsubordination

1. Parties recognize that they shall perform in good faith their obligations under this Convention and all other treaties to which they are parties. Accordingly, without subordinating this Convention to any other treaty,
 - (a) they shall foster mutual supportiveness between this Convention and the other treaties to which they are parties; and
 - (b) when interpreting and applying the other treaties to which they are parties or when entering into other international obligations, Parties shall take into account the relevant provisions of this Convention.

21 J. Pérez de Cuéllar, *Our Creative Diversity*, Report of the World Commission on Culture and Development (Paris: UNESCO, 1996).

22 D. Kröger, "Geistiges Eigentum im Netz. Zwischen Industrierecht und Kulturgut", in C. Schulzki-Haddouti, M. Redelfs (eds), *Informationsfreiheit als Demokratisches Prinzip. Mehr Transparenz durch mehr Informationen Globalization* (Bonn: Bundeszentrale fuer Politische Bildung, 2003), pp. 210–226; J. Smiers, *Arts under Pressure: Protecting Cultural Diversity in the Age of Globalization* (London: Zed Books, 2003).

23 M. Krajewski, S. Bormann, C. Deckwirth, "Auswirkungen des GATS auf Instrumente der Kulturpolitik und Kulturförderung in Deutschland", *Expert Evidence to the German UNESCO Commission* (2004), available at http://www.unesco.de/c_arbeitsgebiete/kkv_gutachten.pdf.

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2. Nothing in this Convention shall be interpreted as modifying rights and obligations of the Parties under any other treaties to which they are parties.

The Convention should in no way be subordinate to GATS, as favored by the USA, but the Convention should also not be superior to GATS, as favored by the advocates of cultural freedom (previously known as "exception culturelle") such as, among others, France and Canada. Both treaties should rather be seen as equal, so that any conflicts arising can be negotiated and solved in individual cases.

The current situation of intellectual property rights in Germany

German intellectual property rights law (UrhR) was adapted and formally initiated by the EU-Copyright directive of May 22, 2001 (EU 2001) to cover the digitalization of intellectual works, and has affected authors, exploiters and users. The first implementation of the EU Directive became legally binding under the German intellectual property rights law as of September 13, 2003. With the following so-called "Second Basket" (*Zweiter Korb*), the Ministry for Justice (BMJ) in charge of IPR was confronted with many unsolved problems and conflicts in interests in regulation measures for intellectual property rights and necessary exemptions.

The politically debated and certainly most interesting question for the public in the course of the reform is in how far the rights regarding *private copies* established for the analogue media can be accepted by the law in the electronic environment. Amazingly the BMJ has seen a certain element of flexibility regarding private copies in the jungle of commercial entitlements and has attempted, if with considerable conditions, to retain this for consumers. Private copies should remain a possibility – at least, that is the theory. It is expected, as is already the case in the games sector, that electronic products are protected by technical measures, and the principle entitlement to a private copy can longer be redeemed. If the technical measures do not permit private copies, then private copying by breaking DRM codes will be illegal. The music industry is certainly outraged following the suggestion by the BMJ that private downloads from exchange servers within a certain limit should not be liable for prosecution. In addition, the wording that copying and downloading of music items is only prohibited when it is obvious for the user that the item is an illegal copy seems to be insufficient for the industry.

In this context of this article we are more interested in the consequences of the enforcement of intellectual property rights in education and science.²⁴ The interests of these sectors were until now barely considered in the adaptation of intellectual property rights. There was no real representation of interest for science and education, notably compared with the powerful lobbying *Börsenverein*, the German interest group of publishers and booksellers. This has meanwhile changed decisively with the foundation of the Coalition for Education and Science (*Aktionsbündnis*

24 R. Kuhlen, "Wie öffentlich soll Wissen für Wissenschaft und Unterricht sein? Anmerkungen zum Urheberrecht in der Informationsgesellschaft", *Festschrift für Jürgen Krause* (in press 2005), text available at http://www.inf-wiss.uni-konstanz.de/People/RK/Publikationen2004/rk_urh_in_D-fuer_ie-buch.pdf.

Urheberrecht für Bildung und Wissenschaft, see <http://www.urheberrechtsbuendnis.de/links.html>), whose "Göttingen Declaration"²⁵ was signed by the six large scientific organizations, including the Science Council (*Wissenschaftsrat*); by more than 250 professional societies (*Fachgesellschaften*), including most library and information organizations; and by more than 3,500 individuals (as of November 2005). Two especially critical points, also relevant for libraries, follow.

For the use of electronic media in universities a so-called "on the spot consultation" has been formulated in §52b of the draft German intellectual property rights law. In accordance with this, use of electronic materials is only possible on the premises of and at special workstations in libraries. This regulation is inadequate in both its range – why only libraries and not also educational establishments, museums and non-commercial archives? – and in its limited possibilities for simultaneous use. To restrict the number of works which can be made available simultaneously to the number of examples purchased simply mirrors existing regulations within the framework of the analogue world, instead of benefiting from the possibilities of new technology to allow a more comprehensive and flexible use in the interests of education and science. This would mean that science and education, which have meanwhile been equipped with online access area-wide, would be sent back to the "stone age". In other jurisdictions, such as the UK, the Scandinavian countries, the Netherlands and the U.S.A., this would be an unimaginable restriction, which additionally would run contrary to all plans of the Federal Ministry of Education and Research (BMBF) for the networking of science and education in the framework of the e-Grid initiative. Here, the lack of understanding for the elementary information requirements of science and education in practice shown in the drafts to date can be clearly seen. Time will tell whether the future process of the "*Zweite Korb*" can take these requirements into account.

The suggested regulations in the draft version of §53a of the German copyright law reform, which concede the information industry a quasi monopoly in electronic document delivery and in this way prohibit the libraries from being active in this area should the market provide an appropriate opportunity (as publishers increasingly do in addressing retail markets), would have virtually catastrophic consequences. This suggestion neither meets the practical demands of the scientific and educational establishments nor the conclusions of the Federal Court of Justice in a decision in 1999. In this way, German intellectual property regulations strangle the scientific system and put Germany at a disadvantage in comparison with countries such as the U.K., where the British Library has by far more freedom in its actions – higher fees are only requested in the case of a direct commercial use. In addition, the transfer in electronic form is possible. As long as the user gives his or her confirmation to the British Library that the copy will be only used for personal non-commercial research or private study, the user does not have to pay the additional intellectual property rights fee, which the British Library in all other cases collects in the name of the holder of the rights.

25 Göttinger Erklärung zum Urheberrecht für Bildung und Wissenschaft of July 5, 2004.

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Public documentation, meta-information, search and delivery systems such as *vascoda* (<http://www.vascoda.de/>) and *subito* (<http://www.subito-doc.de/>), which currently receive comprehensive financial support from the public resources of the BMBF, and which are widely used and in demand among the scientific community and in education environments, would then be prohibited from using their electronic capacity. The threat of a scientific two-class system looms on the horizon in which, due to a lack of economic "relevance", certain sectors would not be able to raise the funds for the use of commercial services and would doubtlessly "fall by the wayside". In particular, students, who more strongly rely on the public services of the libraries, would be adversely affected. To reduce their information requirements to the provision of paper versions, as almost cynically suggested by the BMJ, would create a backward situation for education and training. But, again, the regulation according to §53a is still a draft proposal, not yet binding law.

Inconsistencies in the domain-specific information policy (Fachinformationspolitik)

As in other countries, differences in governmental policy in Germany can be seen, for example, in the policy of the Ministry of Justice (stronger protection in the interest of economic exploitation) and that of the Ministry for Research (BMBF). This contradiction will very likely continue to exist in the new government. The BMBF relies on the responsibility of the state for a functional provision of information in science and education. Not only did the BMBF, together with the German scientific community, lobby extensively with a considerable amount of funding for virtual specialist libraries and the development of powerful documentation, meta-information, search and delivery systems, such as the already mentioned *vascoda* and *subito* and many nation-wide information centers, but also very recently initiated the project eSciDOC as a publication platform for research.

eSciDOC is a joint project of the Max Planck Society and the *Fachinformationszentrum Karlsruhe*, in which the political intent of the so-called "Berlin Declaration" for open access to knowledge in science and humanities²⁶ is put into practice and which has found wide support from leading German and international research organizations. eSciDOC will serve science with the development of a multidisciplinary publications and communications platform on an open access basis and is in this way a part of the general e-Science program, which declares public and free use as a major political aim.

If we were to compare the open publications policy represented by the federal government though the BMBF with the aims and wording of the currently valid intellectual property rights and a fortiori with those from the "Zweiter Korb", we can only be amazed or shocked by the level of inconsistency of the German, but naturally also of the European and international information policy in general.

This inconsistency is a fundamental one. One part of scientific and information policy, together with an important part of general policy for the regulation of the handling of intellectual property or with intellectual and electronically represented works, is based on the fact that invention and, in particular, innovation (that is, the

26 Berliner Erklärung über den offenen Zugang zu wissenschaftlichem Wissen, 2003.

economic conversion of inventions into marketable products, production processes and services) is only possible when strong protection measures are established in the interest of the author and the user involved in the investment in information products, which should secure the ownership of knowledge and information. Partly in contradiction to the current existing possibilities of new media surroundings for unreserved usage, the legislator follows strategies of limitation and legal protective measures to secure these strategies, preferably using software-technical measures (DRM).

In contrast, an understanding of knowledge and information is increasingly articulated, even in the economic sciences, which, on the one hand, allows for a difference in character between immaterial and material commodities and, on the other hand, assesses the consequences of the significance of knowledge and information for invention and innovation in a completely different way.²⁷ What is assured for the production of knowledge in science (and in art or cultural commodities in general), namely that the production of new knowledge, is hindered or made practically impossible through limited access to existing knowledge. As a general rule, we can say that the production of knowledge becomes all the more creative and intensive, also in a quantitatively measurably scope, when more freedom is guaranteed for scientific communication. This is also valid for the innovation ability of the economy.

The challenge for libraries

Regarding information policy, the international library association, IFLA, has commented on various occasions and in various places on the open conflict regarding the character of information as a public or private commodity. Here, we will mention only the involvement of IFLA, coordinated with UNESCO, in the context of the World Summit for the Information Society and, most recently, with regard to its signing of the Geneva Declaration on the future of the WIPO.²⁸

The IFLA proclaims the fundamental right of human beings both to access and to express information without restriction. IFLA and its worldwide membership support, defend and promote intellectual freedom as expressed in the United Nations Universal Declaration of Human Rights. This intellectual freedom encompasses the wealth of human knowledge, opinion, creative thought and intellectual activity. IFLA asserts that a commitment to intellectual freedom is a core responsibility of the library and information profession worldwide, expressed through codes of ethics and demonstrated through practice.²⁹

27 J. Cortright, "New Growth Theory, Technology and Learning: A Practitioner's Guide", *Reviews of Economic Development Literature and Practice* 4 (2001), text available at <http://www.impresaconsulting.com/ngt.htm>; Hess, Ostrom, "Artifacts, Facilities and Content".

28 The Geneva Declaration on the Future of the WIPO.

29 Committee on Copyright and other Legal Matters (CLM), *The IFLA Position on the Geneva Declaration on the Future of the WIPO*, September 28, 2004, available at <http://www.ifla.org/III/clm/CLM-GenevaDeclaration2004.html>.

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Lobbying for the freedom of information belongs to one of the central values, obligations and aims of the IFLA, entirely in accordance with Article 19 of the Universal Declaration of Human Rights:

people, communities and organizations need universal and equitable access to information, ideas and works of imagination for their social, education, cultural, democratic and economic well-being.³⁰

In particular, the task of the libraries is also to maintain open access to knowledge from the past and present for future generations, as it is only in this way that the generation of new knowledge can be possible. The IFLA distances itself here from a strategy of limitation for the benefit of private (commercial) availing of knowledge and information, in particular because, from a global perspective, this strategy of limitation not only shows itself to be obstructive for innovation in the developed countries of the West and the North, but also leads to a widening of the digital division (*digital divide*) between the North and the South and has shown to and continues to show a deterioration of the economic situation of threshold and developing countries.

In general, the role of the libraries is threatened in their service function by strict IPR regulations and the advancing commercialization of knowledge and information. With the increasing liberalization of trading, also in relation to information-related services, the market will, with support from GATS, assert a claim to look after the security of information for scientific and educational requirements. Should it become reality, the attempt in Germany with the introduction of §53a to reduce or even prohibit the responsibility of libraries for the provision of information and the delivery of documents and also for electronic material in the case of a comparative offer from the open market, would further restrict the public character of knowledge and information. The attempt made on the part of Google to digitalize large libraries and also their own stocks of books, can also be considered in this context. If the markets is in a position in the future to provide not only articles from journals and conference volumes electronically, but also the full texts, and retrospectively the stocks from the past, then the book bastion of the libraries would no longer apply and this could be the end of the public role of libraries. This, of course, must not necessarily mean a public catastrophe – it is not the first time that a technical or media revolution has made established structures obsolete. But if so, there must be a fair chance for new structures and institutions that do not follow stakeholders' interests in the first instance, but act with full responsibility for the needs of science and education for open and free access to knowledge and information. It cannot be possible that information supply in electronic environments designed to ease access to knowledge and information becomes worse than it was in analogue environments.

30 Ibid.

A somewhat subversive suggestion

From the Berne Convention to the present TRIPS treaty, and the WIPO treaties of 1996 to the U.S. DMCA (Digital Millennium Copyright Act)³¹ and the E.U. Directive of 2001,³² the so-called *three-step test* has played an important role.³³ In a manner of speaking, it represents the benchmark for the formulation of compromises between the private and public interests; or to put it another way, in how far private commodities of knowledge and information can partly be given the character of public commodities. The test says that exceptions to the exclusive exploitation (a) can only be made in certain special cases when they (b) do not conflict with a normal use or exploitation and in this way (c) do not result in any unacceptable disadvantages for the creators.

This *three-step test* (Article 9 of the Berne Convention), through which the validity of exceptions to the exclusive right of exploitation should be demonstrated, is in a similar way to the Anglo-Saxon "fair-use principle", not an empirically quantifiable test, but rather limits the scope of flexibility, which appear in concrete cases in the form of barriers (of the exclusive right of exploitation) and which then must be balanced. According to Beger (2004)³⁴ the current exemption rules for science in §52a of the German copyright law (*Urheberrecht*) is fully compatible with the three-step test.

The three-step test is similar to the sacred cow of intellectual property rights. However, as with many other sacred cows, this test could be "slaughtered", or in this case, reversed to the original objective of IPR regulations (namely to foster public welfare) and thus take into account new and fundamentally altered media and technological conditions. Accordingly, in such a way a renewed three-step test suggests that a commercial exploitation of intellectual works (a) is only permitted in special cases when (b) it is ensured that the original works are freely available and accessible for everyone and useable under the reference of the authorship and (c) when the scope of the public availability lies within the full responsibility and informational autonomy of the author of the respective work.³⁵

31 Text available at http://www.eff.org/IP/DMCA/hr2281_dmca_law_19981020_pl105-304.html.

32 Directive 2001/29/EC of the European Parliament and of the Council of May 22, 2001 on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society.

33 M.R.F. Senftleben, *Copyright, Limitations and the Three-Step Test. An Analysis of the Three-Step-Test in International and EC Copyright Law*, dissertation (Amsterdam, 2004).

34 G. Beger, "Hält §52a UrhG dem urheberrechtlichen Dreistufentest stand?", in R. Hammwöhner, M. Rittberger, W. Semar (eds), "Wissen in Aktion. Der Primat der Pragmatik als Motto der Konstanzer Informationswissenschaft, Festschrift für Rainer Kuhlen", *Schriften zur Informationswissenschaft* 41 (Konstanz: Universitätsverlag Konstanz (UVK), 2004), pp. 131–140.

35 R. Kuhlen, J. Brüning, "Creative Commons (CC) – für informationelle Selbstbestimmung, gegen den Trend des Urheberrechts/Copyright als Handelsrecht; oder: Chancen für einen Innovativen Drei-Stufen-Test?", *Information – Wissenschaft & Praxis* 8 (2004), pp. 449–454.

Conclusion

One does not need to fully agree with media theorists such as McLuhan to recognize that the media reality has a stronger effect, at least in a mid-term perspective than the inertia of business and organizational models, which, by all means, have been practical in analogous surroundings and have proved themselves to be acceptable for the authors and users and profitable for the exploiters. Even the protective hand of the legislator will not be able to favor and secure the barriers to innovation for much longer. As long as the many information economy organizations remain in their defensive attitude and waste their energies in fighting wars against what they call information pirates rather than developing new business models appropriate to electronic environments, the old dinosaur argument may apply: not being able to adjust to and thus survive in a radical changing environment which, nowadays, promote and reward knowledge sharing and free access.

It is perhaps not necessary to worry too much about currently obsolete legal regulations and the effect of technical restrictions means – market and civil society, although from different perspectives and with different interests, will certainly find ways out from the dilemma of existing regulations, for example: open/free software is asserting itself as an alternative production model.³⁶ Open access is also proving to be an alternative model to the strategy of limitation of commercial publishers.³⁷ *Creative Commons* has shown itself worldwide to be a possibility for creative people to regain their informational autonomy through the imparting of self-determined licensing rights.³⁸ Collaborative forms of publication, such as Wikipedia (<http://www.wikipedia.org/>) show alternatives to individualistic understanding of authorship and creativity. Even commercial ventures such as Google advocate that the access to information and the information itself can be free (by all means in the sense of free of charge, not necessarily in the sense of freedom) and nevertheless profits of billions can be achieved. Current business models in the music industry, for example, in Germany *Vitiminic* (<http://www.vitiminic.de/main>) or *Dorfdisco/Potato* (<http://www.dorfdisco.de/index.pho>; <http://potatosystem.com/info/Ger/>), suggest that music platforms in the interest of creativity are possible without the input of big music labels, which work with high transaction costs and aim for large profit margins; and that digital music can also be used without strict DRM.³⁹

36 V. Grassmuck, *Freie Software. Zwischen Privat- und Gemeineigentum* (Bonn: Bundeszentrale fuer Politische Bildung, 2002); R. Stallmann, *Free Software, Free Society* (Boston: GNU Press, 2002).

37 Andermann, "Entwicklung von alternativen Publikationsstrukturen in Europa und den USA"; D. Prosser, "On the Transition of Journals to Open Access", *ARL Bimonthly Report* 227 (April 2003), available at <http://www-arl.org/newsltr/227/openaccess.html>.

38 Kuhlen, Brüning, "Napsterisierung und Venterisierung"; R. Kuhlen, "Creative Commons. Im Interesse der Kreativen und von Innovation", in K. Lehmann, M. Schetsche (eds), *Die Google-Gesellschaft. Wissen im 21. Jahrhundert* (Transcript-Verlag, 2005).

39 R. Kuhlen, "Die Digitale Kopie: Wie frei ist der Nutzer im Internet? Oder: IPR – nicht nur im Handelsrecht. Potenziale wissenschaftlicher, sozialer und wirtschaftlicher Entwicklung", 2. Leipziger Dialog zum Welttag des geistigen Eigentums, Leipzig, May 3,

WIPO is on the right track with the revision of its previous policy and its current conception of open forms of usage of knowledge and information as a chance for development. The UNESCO Convention is also heading down the right path with its Convention on the Protection and the Advancement of Cultural Diversity and its demand that cultural commodities are, in principle, public commodities. As soon as the information industry understands, paradoxical though it may sound for them, that they can hardly make any profit with the information itself, but rather through value-added offers accompanying them, then the legislator will no longer have to create laws which simply do not represent the normative behavior and ethical expectations of creators and the users in an electronic environment. Then libraries will be able to continue to expand their policy of free access to knowledge and information, together with their information work towards the advancement of creativity, innovation and development and the sustainability of information for future generations.

2005, available at <http://www.inf-wissen.uni-konstanz.de/People/RK/Vortraege04-Web/welttagIPO030505-vortrag-rk.pdf>.

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